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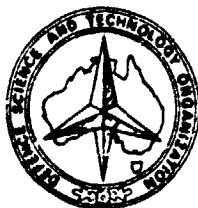
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HEAT CAPACITY MAPPING MISSION PROJECT HCM-051 PROGRESS REPORT TO 31 AUG 1980

by

C.S. NILSSON, J.C. ANDREWS, P. SCULLY-POWER

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HEAT CAPACITY MAPPING MISSION
 PROJECT HCM-051
 PROGRESS REPORT TO 31 AUG 1980

C.S. NILSSON, J.C. ANDREWS¹, P. SCULLY-POWER²,
 S. BALL³, G. SPEECHLEY and A.R. LATHAM

ABSTRACT

This report covers progress on NASA Project HCM-051 to 31 Aug 1980. A total of 952 standard IR photo images have been received and of these, 118 images on computer compatible tape (CCT) have been received and 112 images digitally enhanced. Additional ground-truth data have been received from CSIRO. The Tasman Front was delineated by airborne expendable bathythermograph (AXBT) survey on 29 Aug 78 and an HCMM IR image on the same day shows the same principal features as determined from ground-truth. It is clear that digital enhancement of HCMM images is necessary to map ocean surface temperatures and when done, the Tasman Front and other oceanographic features can be mapped by this method, even through considerable scattered cloud cover.

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1. AIMS OF HCM-051

The primary aim of this experiment is to use the Heat Capacity Mapping Mission (HCMM) satellite infra-red (IR) surface temperature data to obtain a time series picture of the principal ocean fronts off East Australia over the period May 1978 - May 1979. There are two important steps along the way to achieving this. Firstly, the surface IR manifestations of the Tasman Front (TF) and East Australian Current (EAC), as seen by satellite, must be related to the subsurface oceanographic structure as determined by conventional survey techniques (ground-truth) and secondly, it must be shown that the fronts as seen by satellite can be followed on a day-by-day basis.

A secondary aim is to study oceanographic fronts and eddies over the whole area covered by HCM-051, in particular to study the temporal and spatial variations of the Sub-Tropical Convergence south of Australia.

2. SATELLITE STANDARD PRODUCT IMAGE DATA RECEIVED TO DATE
(31 AUG 80)

The list of data for which standard (un-enhanced) images have been received is given in Appendix A. The list is subdivided on the basis of image priority and status of computer-compatible tape (CCT) orders. A total of 952 standard IR photo images have been received, of which 137 have been classified as of no use to this project (priority "0") and a further 128 images are repeats, leaving 687 images of all useful priorities (AA, A and B) listed. Assessment of image priority is discussed in Section 4. Thirty three of these images have been classified as of "low yield" (marked "R" for reject in the priority column) because of the small useful area of ocean surface visible, leaving a total of 654 IR useful images of adequate quality to warrant further processing.

These 654 images can be shown in an array of satellite cycle number (1-25) versus reference day (0-15 within each 16 day cycle). This is given in Table 1, where the number in each location is the number of useful IR images for that day. The shaded periods correspond to periods in which ground truth data were obtained.

ALL IMAGES PP ≥ 1

Satellite Cycle Number	Reference day															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1															1	2
2	2	3	1	1				1	1							
3										2						
4									2	1	1	1		2	2	
5	1	1	1		7	3	2	3	2	1	4	3	3	1		3
6	4	3	1	2												
7																
8				1	5	3	3	2			4	3				
9											1					
10	3	1		3											1	
11						5	4									
12	2	1				4	2	4			4	3	2			
13		2		1		2		1		2	3	5				
14	6	6	1	2	5	6	1			2	2		2		1	
15	2				1	1	1			1		2	3		3	1
16				3	3		2	2	1	3	7	6	1		3	2
17	5	4	2	3		3	4	4	2	2	5	3	2	1		5
18	5	4	1		3	4	4	2		4	4	4	3	1		
19		3		2						2				1		
20	3	2														
21																
22		1			2										3	3
23										2	1				1	1
24	1	1		3	2	1				1						
25																

NOTE: 654 images from a total listed (31 Aug 80) of 952.

Table 1. The distribution of standard images of priority PP ≥ 1 , excluding low yield images, as a function of satellite cycle number and reference day. The shaded areas correspond to periods for which ground truth data are available.

3. GROUND TRUTH DATA

Six oceanographic surveys by ships in the Tasman Sea in support of HCM-051 were undertaken by the Australian Defence Science and Technology Organisation (DSTO). Four surveys by Royal Australian Air Force Orion aircraft in direct support of HCM-051 using air expendable bathythermographs (AXBT) were carried out, three of these successfully. In addition, the Commonwealth Scientific and Industrial Research Organization (CSIRO) carried out twelve research cruises during the HCM period to study the Tasman Front and its associated warm-core eddies.

These surveys are listed in chronological order in Table 2.

4. ASSESSMENT OF IMAGE PRIORITY

Standard product images are initially assessed as they arrive for general interest and suitability. If the image is clearly of no foreseeable use, it is given a priority of zero and is listed as such on the master file. An image that only includes a relatively small area of useful ocean surface has a priority prefix of "R" assigned. It would not normally be ordered as a CCT, but remains in the processing stream in case subsequent analysis of neighbouring images suggests that the "R" image may be needed. This is as far as grading by quality is taken. Subsequent grading is based on day of observation and location. Thus the next step is performed by computer. Each record of image data on the update file is compared with the list of ground truth to determine (to the nearest day and lat/long degree) if time and location overlap with ground truth boundaries. If so, the priority assigned is "3". If not, but the image overlaps with the latitude band of interest to mapping the Tasman Front (25-36°S), the priority assigned is "2". South of that latitude limit and not coincident with the small amount of ground truth at higher latitudes, the priority given is "1". The priority thus assigned is given in the Appendix in the column headed "PP".

4

CRUISE IDENT	HCM DAYS	LAT RANGE	EAST LONG.
SP 08/78	026-041	-34-40	155
SP 09/78	043-054	-30-35	157
SP 10/78	085-100	-31-34	155
K 14A/78	092-100	-30-34	155
SP 11/78	101-114	-26-34	162
AXBT 01	125-126	-30-35	162
DM 6A/78	131-138	-30-34	171
DM 6B/78	140-145	-28-34	173
SP 12/78	142-149	-34-43	153
SP 13/78	150-165	-44-53	151
SP 14/78	170-176	-34-40	152
SP 15/78	205-217	-25-37	153
SP 16/78	218-226	-34-37	153
SP 17/78	227-229	-33-35	154
AXBT 02	231-231	-30-35	160
AXBT 03	288-288	-28-34	160
K 5A/78	291-296	-27-34	158
K 14B/78	299-309	-27-34	155
DM 02/79	316-321	-33-34	160
SP 02/79	322-325	-34-34	154
SP 03/79	326-336	-23-34	155
SP 04/79	337-350	-31-32	153

Table 2. Ground truth data obtained wholly or partly in support of Project HCM-051. The cruises prefixed with "SP" are CSIRO cruises using R.V. SPRIGHTLY. The western boundary of each cruise area is assumed to be the east coast of Australia; "EAST LONG" is the approximate eastern boundary of the cruise or survey areas.

The priority for ordering CCT data "PR" is based on "PP", but is not identical. In general, the top priority PR = AA corresponds to PP = 3, PR = A corresponds to PP = 2 and PR = B corresponds to PP = 1. However, special periods other than ground truth periods may be raised in priority. For example, all data for which PP \geq 2 in the period 8 Jul 78 to 18 Aug 78 (HCM days 073-114) have been raised to PR = AA. This period is from HCM cycle 5 ref. day 8 to HCM cycle 8 ref. day 1 (cyc 5/8 to cyc 8/1) and has been chosen for special attention. Table 3 shows the number of images of priority PP \geq 2 as a function of satellite cycle and reference day. Cycle 6 is unique in that each of the 16 reference days has at least one image of sufficient priority. Also, there are good ground truth data available from cruises SP 10/78, K14A/78 and SP 11/78 over the period 20 Jul 80 to 18 Aug 80 (cyc 6/4 to cyc 8/1). Thus this period seems particularly suitable for ascertaining whether or not it is possible to track the Tasman Front from day to day using HCM data.

If the priority PP is prefixed by an "R", the priority PR associated with CCT orders is reduced one level from the usual transformation, for example, "R3" becomes "A" instead of "AA".

5. STATUS OF HCM-051 IMAGE PROCESSING

5.1 Data processed to date (31 Aug 80).

The data in Appendix A can be summarized as follows: We have received a total of 118 images, of which 44 are priority AA, 41 priority A and 33 priority B. Of these, 112 images have been digitally enhanced using the procedure discussed in the previous report (30 Apr 80). Of the six outstanding, one is a repeat (already enhanced) and the other five have some minor problem. All but six of the enhanced priority AA images are associated with CSIRO ground truth data and were thus listed in a lower priority group in the last report. We have not yet been able to compare IR imagery with the CSIRO cruise results, but some DSTO ground truth data are compared in the next section. With reference to the lists in the appendix: if the status word contains an "R", the CCT has been received. The rest of the status word shows the extent to which processing has been completed. Further details are given at the start of each priority list.

ALL PF ≥ 2

Satellite Cycle Number	Reference day															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1																
2		2	1	1					1							
3										2						
4							2		2		1	1		2	2	
5	1		1		4	1	1		1		1	1	1	1		1
6	3	1	1	2	1	2	1					2	2	2	2	4
7																
8				1	2	2	2	1			3	2				
9	1															
10	3	1		2	1	4	4	2	1	2	4	4	1	1		3
11	3	2	1	2	2	3	2									
12	2					3	1	1			3	1	1			
13	1	1		1		1				1	2	3				
14	4	4	1	2	4									1		4
15						1				1		1	2		2	1
16				2	1		1	1		2	3	3			2	1
17	1	2		2		2	2		2	1	2	2		1		3
18	3	2			1	2	1	1		2	2	2	1	1		
19	2			2	2					2		2	1			3
20	2	1														
21										2	1					
22															2	2
23	1									1	1				1	
24				2	1					1						
25																

SUM = 410 images from a total listed (31 Aug 80) of 952.

Table 3. The distribution of standard images of priority PF ≥ 2 , excluding low yield images, as a function of satellite cycle number and reference day. The shaded areas correspond to periods for which ground truth data are available.

5.2 Organization of CCT processing.

The Defence Research Centre Salisbury (DRCS) gave notice in June that the time of one of us (S.B) on this project would cease as of 31 Dec 80 and in the meantime would be limited to one-third rate. The system of processing CCT's outlined in the last report therefore had to be reviewed and expanded. The data structure on the CCT's is such that a considerable investment in software is necessary to process the tapes on different computing systems. We decided, however, to set up a parallel processing system at RANRL in Sydney which in fact started operating in July. This would progressively take over the processing and in the meantime enable peak processing loads to be divided. Most of RANRL's heavy computing is performed under bureau services by a CDC 6600 system. However, the 60 bit word structure of the CDC 6600 does not lend itself to processing HCM data. RANRL does have a PDP 11/40 which of course is smaller and slower, but has a more suitable 16 bit word structure. This report has another author (G.S) who has been responsible for the data processing on the PDP 11/40. The conversion to this system as the principal processing system initially delayed our processing of the initial batch of CCT data, but is now enabling the later (and higher priority) data to be processed much more quickly.

The transformation of enhanced image data to a photographic image is performed at another institution, the CSIRO Division of Mineral Physics (North Ryde, NSW). This is primarily a LANDSAT facility and at the moment there is a backlog of HCM data awaiting processing. This is the reason many images listed in the Appendix have a status word ending in "E", i.e. enhanced but no photographic image yet available.

The processing is also slowed by other aspects of the whole system. The PDP 11/40 only has a tape capability of 800 bpi. CSIRO, on the other hand, cannot process enhanced data except at 1600 bpi. Hence a new HCM data tape is first copied on the CDC 6600 at North Sydney to 800 bpi. This copy is then processed at RANRL and the enhanced image must be copied back to 1600 bpi at North Sydney before being sent to CSIRO. These details may explain why processing

is not performed as quickly as it might be at, say, NASA/GSFC. Nevertheless, we can now process 20-30 images per week if need be, at least to the point of enhancement, and that rate is no longer the limiting factor in the progress of this project.

5.3 Images ordered and/or received (31 Aug 80).

As of 31 Aug 80 185 images of priority PP ≥ 2 had been ordered and, of these, 85 received. The distribution of all these images as a function of cycle/ref. day is shown in Table 4. This is useful in that it shows the distribution of enhanced images in the general area of the Tasman Front that we can expect in the near future. Eighty-one (81) of these have been digitally enhanced.

Including priority 1 images, 112 have already been enhanced and the distribution of these is shown in Table 5.

6. EXAMPLES OF CCT ENHANCED IMAGES

Plate 1 shows an example of an enhanced night-time image of the sea surface south of the Tasman Front area. In this and subsequent prints, cold is white, hence clouds show as white. The grey scale on each enhanced print covers 10°C , but only the darker ten intervals are useful, covering the upper 5°C . Each grey scale interval corresponds to a change of 0.5°C . Thus, in terms of temperatures *as recorded by HCMM*, the grey scale can be used to determine the actual sea surface temperature. In Plate 1, for example, the 20 steps of the grey scale cover from 2°C to 11.5°C . Note that the range will be different for each image. We have previously observed that HCMM temperatures are about 7°C less than actual. Temperatures quoted in this section all refer to HCMM apparent temperatures.

Plate 1 shows some striking frontal structure including filaments of cooler water within warmer and vice versa. The main front in the bottom of the image is the Sub-Tropical Convergence.

Plate 2 is a print from a standard (unenhanced) transparency. No ocean temperature structure is visible in the print or in the original. Cloud provides the only contrast to the much warmer sea surface.

Plate 3 shows the enhanced image corresponding to Plate 2. The 20-step grey scale corresponds to (HCMM) 4.0 to 13.5°C . The coastline of Eastern Australia is defined on the left-hand side of

IMAGES ORDERED OR RECEIVED, PP: 2

Satellite Cycle Number	Reference day															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1																
2			1													
3																
4							2		1		1	1		2	2	
5	1		1		2		1		1		1	1	1	1		1
6	3	1	1	2												
7																
8		1		1	2	2	2				3	2				
9																
10																
11																
12	2					2	1				3					
13										1	2					
14																
15						1							2			
16																
17																
18																
19		2								1				1		
20	2				1											
21																
22																
23																
24																
25																

SUM = 185 images from a total listed (31 Aug 80) of 952.

Table 4. The distribution of standard images of priority PP: 2, excluding low yield images, for which CCT's have been ordered or received, as a function of satellite cycle number and reference day. The shaded areas correspond to periods for which ground truth data are available.

ORIGINAL PAGE IS
OF POOR QUALITY

ENHANCED IMAGES, ALL PRIORITIES.

	Reference day															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1																
2			1													
3																
4							4			1	1	1		2	2	
5	1		1		4						2					
6			1													
7																
8					5	2	3									
9											1					
10																
11																
12	2					2	2	1			3	1				
13										2	3					
14																
15						1								3		
16																
17																
18																
19																
20																
21																
22																
23																
24																
25																

SUM = 112 images from a total listed (31 Aug 80) of 952.

ORIGINAL PAGE IS
OF POOR QUALITY

Table 5. The distribution of digitally enhanced images of all priorities, excluding low yield images, as a function of satellite cycle number and reference day. The shaded areas correspond to periods for which ground truth data are available.

the print. (The coordinates given at the bottom of each print correspond approximately to the centre of the image). Note that, being night-time, the land is cold relative to the sea and, on the enhanced print, both land and cloud are equally white. If the cloud boundaries are studied on each print, it is apparent that there exists considerably more lower cloud than is visible in Plate 2. A large tongue of warm water is visible in the NW quarter (north is to the top) of Plate 3. Well defined fronts, particularly on the western edge, define the boundaries of this warmer water. Some small gaps in the cloud cover in the SE quarter reveal the existence of a body of warm water in that area. It is not clear, from this image alone, how or if it is connected with the NW tongue.

Figure 1 shows the dynamic topography determined by air survey (AXBT) off the Eastern Australia on 29 Aug 78. The heavy black contour labelled 190 (dyn cm) corresponds to the subsurface front between the warm Coral Sea and cooler Tasman Sea water. This is the Tasman Front. We would expect the front to be generally, but not necessarily exactly, associated with a surface temperature front. Inside and to the north of the front (i.e. contours > 190) we would expect to see warmer water. Plate 4, which is an enhanced night-time HCMH image for the same day, clearly shows that front east of Sugarloaf Pt. An overlay shows that the correspondence is not exact, the warmer surface water extends to the coast at about 32°S and at least near the continental shelf, extends a little further south than the 190 dyn cm dynamic contour - closer to 165 dyn cm. Sometimes the high current region (190 dyn cm) of the front seems to carry a narrow stream of warmer water and other times, as is the case here, the warm surface water extends south as a large nearly isothermal area. We have yet to learn the distinguishing causes of these phenomena.

Plate 5 shows an enhancement of the area immediately to the south of that shown in the previous Plate, taken on the same satellite pass. Thus the northern edge of Plate 5 adjoins the southern edge of Plate 4. The mid-range temperature of Plate 5 is 2.0°C less than that of Plate 4, so the image intensity is not continuous across the two Plates. Plate 5 shows the intricate nature of the sea surface temperature contours near Cape Howe.

A warm plume appears to have curled around into Bass Strait, the cooler Bass Strait water being contained against the coast for about 80 km north of the Cape.

There appears to be quite a distinct and continuous front starting at the coast (at the northern extremity of the Bass Strait water) and extending eastwards for about 200 km. The convoluted "tendrils" of warmer water appear to be linked near the eastern boundary of the image with the warmer Tasman Sea water to the north of this point. This image provides a good example of the detail available from an IR image that could not possibly be mapped by ship.

The apparent discontinuity at the common boundary between Plates 4 and 5 could be avoided by the use of a varying mid-range temperature (MRT) during enhancement. To date, we have treated each image separately and enhanced around a suitable MRT value. Generally, this MRT decreases with increasing latitude and varies seasonally. When we have processed the available images in this manner we will have a record of MRT value as a function of latitude and time of year. It will then be possible to approximately remove the dependence of temperature on latitude for each complete satellite pass. That is, the MRT value can be varied with latitude such that it is continuous along the whole satellite pass (45°S to 25°S , say). Thus the overall dependence of sea-surface temperature on latitude will be removed from the enhanced image and only the mesoscale structure will remain. Each enhanced image will be continuous with its neighbour to the north or south. Further, more of the enhanced image will appear within the optimum part of the grey scale. As it is now, the useful 5° span of the grey scale is largely used to cover the variation with latitude. Thus, in Plate 5, little detail can be observed in the water north of the visible front. Prosecution of this processing plan has had to wait pending initial processing in the present manner.

Plate 6 has been chosen to illustrate how well the Tasman Front can be traced through considerable cloud cover. This fact is important when considering the frequency of images suitable for mapping the front over an extended period. Cloud-free imagery is not essential.

APPENDIX: CURRENT FILE OF HCM-051 DATA.

THE FOLLOWING LISTS SHOW THE PROCESSING OF HCM-051 DATA AS OF 31 AUG 80.

THE DATA ARE LISTED UNDER THE FOLLOWING HEADINGS:

"B" IS THE INCOMING STANDARD IMAGE BATCH NUMBER; THE LARGER THE NUMBER, THE MORE RECENTLY THE PHOTO IMAGE HAS BEEN RECEIVED. DUPLICATE IMAGE IDENTs ARE DIFFERENTIATED BY DIFFERENT BATCH NUMBERS.

"FR" IS THE IMAGE FRAME NUMBER.

"LAT" AND "LONG" ARE THE IMAGE CENTER COORDINATES AS SUPPLIED BY NASA.

"DAY" AND "HHMM" CONSTITUTE THE HCM TIME (DAYS, HOURS AND MINUTES) PART OF THE IMAGE IDENT AND "T" IS THE IMAGE TYPE (-2 FOR DAYLIGHT IR, -3 FOR NIGHT IR), WHICH COMPLETES THE IMAGE IDENT CODE.

"PP" IS THE IMAGE PRIORITY WITH RESPECT ONLY TO IMAGE TIME AND LOCATION SET AGAINST THE AIMS AND PRIORITIES OF HCM-051. IMAGE QUALITY IS NOT A GRADED QUANTITY EXCEPT INsofar AS A USELESS IMAGE IS GIVEN PRIORITY PP = 0. IMAGES FOR WHICH PP = 0 ARE EXCLUDED FROM THESE LISTS. HOWEVER, IF PRIORITY PP IS PREFIXED BY AN "R", THE IMAGE ONLY INCLUDES A SMALL AREA OF USEFUL DATA AND WILL BE DOWNGRADED WHEN IT COMES TO ORDERING C/C TAPES. PP = 3 IS THE TOP PRIORITY.

"PR" IS THE PRIORITY FOR ORDERING C/C TAPES. MOSTLY, BUT NOT ALWAYS, THE TOP PRIORITY "AA" CORRESPONDS TO PP = 3, PRIORITY "A" CORRESPONDS TO PP = 2 AND PRIORITY "B" TO PP = 1. HOWEVER, SOME PRIORITY 2 IMAGES IN SELECTED TIME PERIODS HAVE BEEN RAISED TO PRIORITY AA AND A "R" ("REJECT") PREFIX AUTOMATICALLY LOWERS THE C/C TAPE ORDERING PRIORITY BY ONE GRADE. FURTHER INFORMATION ON EACH PRIORITY "PR" IS GIVEN WITH THE DATA LISTS.

"STATUS" REFERS TO OUR PROCESSING STATUS AS OF 31 AUG 80. DETAILS OF THE BREAKDOWN OF THIS WORD ARE GIVEN IN THE DATA LISTS.

"POS ERR" IS THE DIFFERENCE (OUR'S -NASA'S) IN IMAGE CENTER COORDINATES GIVEN IN DMM (DEGREES, MINUTES) FOR LATITUDE AND LONGITUDE BETWEEN NASA'S VALUES AND THOSE WE HAVE DETERMINED FROM KNOWN LANDMARKS (WHERE VISIBLE).

"OR" IS THE OUTPUT PROCESSING BATCH NUMBER.

"MRT" IS THE APPARENT "MID-RANGE TEMPERATURE" OF THE SURFACE WATER AS DETERMINED FROM THE CCT IMAGE (USING THE "STATS" PROGRAM). IT IS ACTUALLY ESTIMATED TO THE NEAREST 0.5 C FROM THE MAXIMUM MEAN TEMPERATURE LESS ABOUT 2.5 DEGREES C OF ALL APPROPRIATE 20X20 PIXEL AREAS OF WATER SURFACE. THE UNITS ARE TENTHS OF DEGREES C.

"TRUTH" COMES LAST AND IS THE IDENT OF THE CRUISE OR OTHER (E.G. AXHT) GROUND TRUTH DATA AND IS APPLICABLE ONLY TO IMAGES FOR WHICH PRIORITY PP = 3.

THESE IMAGES ARE NEEDED FOR THE PRINCIPAL AIMS OF HCM-051 AND IMMEDIATE COMPARISON WITH EXISTING GROUND TRUTH OR TESTING OF DAY-TO-DAY CONTINUITY OF APPARENT FRONTS.

IMAGE STATUS DATA ARE DIVIDED INTO THREE GROUPS FOR THIS PRIORITY. THESE GROUPS ARE FOR CCT DATA WHICH (1) HAVE NOT YET BEEN ORDERED, (2) HAVE BEEN ORDERED BUT NOT YET RECEIVED AND (3) HAVE BEEN RECEIVED. STATUS DATA CAN BE INTERPRETED AS FOLLOWS: "G"= GRID MADE, "O"= CCT ORDERED, "R"= CCT RECEIVED, "S"= IMAGE STATISTICS OBTAINED, "E"= IMAGE ENHANCED DIGITALLY, "C"= CSIRO ENHANCED PHOTO, IMAGE GENERATED, "P"= ENHANCED PHOTO, PRINTED. THE ABSENCE OF APPROPRIATE LETTERS INDICATES THE NEGATIVE.

GROUP (1), C/C TAPES HAVE NOT YET BEEN ORDERED FOR THE FOLLOWING IMAGES:

B	FR	DATE	LAT	LONG	DAY	HHMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
16	105	210578	-3100	15935	025	03360	-2	3	AA					SP088
16	206	220578	-3722	15640	026	03530	-2	3	AA					SP088
16	204	220578	-3116	15504	026	03540	-2	3	AA					SP088
22	142	230578	-3226	15841	027	15020	-3	3	AA					SP088
22	143	230578	-3834	15702	027	15030	-3	3	AA					SP088
16	238	240578	-4335	14920	028	04270	-2	3	AA					SP088
16	236	240578	-3731	14732	028	04290	-2	3	AA					SP088
10	124	250578	-4116	14402	029	04460	-2	3	AA					SP088
16	226	270578	-3548	15737	031	03470	-2	3	AA					SP088
16	250	280578	-3820	15344	032	04040	-2	3	AA					SP088
16	248	280578	-3214	15207	032	04060	-2	3	AA					SP088
16	241	280578	-3344	15945	032	14560	-3	3	AA					SP088
16	242	280578	-3950	15803	032	14570	-3	3	AA					SP088
20	018	290578	-3332	14752	033	04240	-2	3	AA					SP088
16	266	290578	-3626	15426	033	15150	-3	3	AA					SP088
15	364	300578	-4131	14531	034	04400	-2	3	AA					SP088
16	258	300578	-4343	14741	034	15350	-3	3	AA					SP088
22	076	070678	-3742	15624	042	03520	-2	3	AA					SP088
22	074	070678	-3147	15447	042	03540	-2	3	AA					SP088
21	030	080678	-3325	15041	043	04110	-2	3	AA					SP098
19	082	080778	-3120	15904	073	03320	-2	2	AA					
20	004	100778	-3301	15024	075	04080	-2	2	AA					
18	106	110778	-3505	14622	076	04250	-2	2	AA					
9	465	120778	-3131	14913	077	15330	-3	2	AA					
20	122	130778	-3105	16034	078	03250	-2	2	AA					
19	014	150778	-3241	15933	080	14500	-3	2	AA					
9	077	160778	-3604	14811	081	04180	-2	2	AA					
9	431	170778	-3125	15048	082	15260	-3	2	AA					
10	058	190778	-3704	15909	084	03350	-2	3	AA					SP108
15	125	200778	-3339	16054	085	14440	-3	2	AA					
10	604	280778	-2529	15055	093	15280	-3	2	AA					
10	606	280778	-3740	14750	093	15320	-3	3	AA					SP108
14	141	290778	-3452	16139	094	03210	-2	2	AA					
14	139	290778	-2844	16006	094	03230	-2	2	AA					
16	306	300778	-3632	15734	095	03390	-2	3	AA					SP108
16	304	300778	-3025	15558	095	03400	-2	3	AA					SP108
18	009	030878	-3613	14523	099	15420	-3	3	AA					SP108
19	026	050878	-3607	15432	101	03490	-2	3	AA					SP108
19	024	050878	-2959	15257	101	03510	-2	3	AA					SP108
10	016	100878	-2633	15346	106	03450	-2	3	AA					SP118

PRIORITY AA GROUP(1) CONTINUED

R	FR	DATE	LAT	LONG	DAY	HMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
19	014	120878	-3107	15428	108	-15080	-3	3 AA						SP118
11	039	130878	-3717	14819	109	-15280	-3	3 AA						SP118
9	036	170878	-3631	15443	113	-15020	-3	3 AA						SP118
17	032	140978	-2927	15004	141	-15220	-3	3 AA						DM6R8
17	033	140978	-3534	14830	141	-15240	-3	3 AA						DM6B8
17	034	140978	-4141	14644	141	-15260	-3	3 AA						SP128
18	015	170978	-4514	15543	144	-03480	-2	3 AA						SP128
18	013	170978	-3910	15349	144	-03490	-2	3 AA						SP128
18	011	170978	-3305	15208	144	-03510	-2	3 AA						DM6RR
18	009	170978	-2700	15037	144	-03530	-2	3 AA						DM6B8
14	510	180978	-4419	15050	145	-04060	-2	3 AA						SP128
19	004	180978	-3034	15547	145	-14580	-3	3 AA						DM6B8
19	005	180978	-3641	15411	145	-15000	-3	3 AA						DM6B8
11	008	190978	-4058	14513	146	-04250	-2	3 AA						SP128
17	125	230978	-4529	15240	150	-03590	-2	3 AA						SP128
17	123	230978	-3926	15045	150	-04010	-2	3 AA						SP128
10	119	240978	-4147	14654	151	-04180	-2	3 AA						SP138
5	038	240978	-4249	14915	151	-15130	-3	3 AA G		20	00			SP138
5	216	031078	-4519	15536	160	-03460	-2	3 AA G						SP138
20	010	041078	-4728	15149	161	-04040	-2	3 AA						SP138
19	064	041078	-4133	14949	161	-04050	-2	3 AA						SP138
19	118	091078	-4411	15319	166	-14530	-3	3 AA						SP138
17	146	131078	-3831	15634	170	-03340	-2	3 AA						SP148
17	144	131078	-3226	15454	170	-03360	-2	3 AA						SP148
21	056	141078	-4347	15338	171	-03510	-2	3 AA						SP148
21	054	141078	-3744	15147	171	-03520	-2	3 AA						SP148
21	052	141078	-3138	15010	171	-03540	-2	3 AA						SP148
19	066	141078	-3855	15631	171	-14450	-3	3 AA						SP148
11	442	151078	-4300	14851	172	-04090	-2	3 AA						SP148
21	036	151078	-3659	15231	172	-15020	-3	3 AA						SP148
21	037	151078	-4304	15042	172	-15040	-3	3 AA						SP148
21	040	161078	-3146	14922	173	-15190	-3	3 AA						SP148
21	041	161078	-3751	14744	173	-15210	-3	3 AA						SP148
21	042	161078	-4355	14553	173	-15220	-3	3 AA						SP148
11	016	161178	-3553	14723	204	-04040	-2	3 AA						SP158
19	016	161178	-3050	15446	204	-14540	-3	3 AA						SP158
19	017	161178	-3656	15310	204	-14560	-3	3 AA						SP158
21	114	211178	-4041	15005	209	-03570	-2	3 AA						SP158
21	112	211178	-3435	14822	209	-03580	-2	3 AA						SP158
20	116	211178	-3105	15602	209	-14480	-3	3 AA						SP158
20	117	211178	-3711	15426	209	-14500	-3	3 AA						SP158
14	534	221178	-4014	14522	210	-04150	-2	3 AA						SP158
22	056	221178	-2558	15240	210	-15050	-3	3 AA						SP158
22	057	221178	-3204	15111	210	-15070	-3	3 AA						SP158
22	058	221178	-3810	14934	210	-15080	-3	3 AA						SP158
22	045	231178	-3643	14522	211	-15260	-3	3 AA						SP158
21	209	251178	-3832	15523	213	-03330	-2	3 AA						SP158
21	206	251178	-3226	15344	213	-03350	-2	3 AA						SP158
21	204	251178	-2618	15214	213	-03360	-2	3 AA						SP158
21	306	261178	-3842	15052	214	-03510	-2	3 AA						SP158
21	304	261178	-3235	14911	214	-03530	-2	3 AA						SP158
19	147	261178	-3052	15727	214	-14420	-3	3 AA						SP158
19	148	261178	-3658	15551	214	-14440	-3	3 AA						SP158
5	083	271178	-4017	14644	215	-04090	-2	3 AA G		15	16			SP158
19	066	301178	-3253	15514	218	-03280	-2	3 AA						SP158
19	064	301178	-2646	15343	218	-03300	-2	3 AA						SP158

B	FR	DATE	LAT	LONG	DAY	HHMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
19	057	021278	-3624	15249	220	-14550	-3	3	AA					SP168
20	048	031278	-4023	14335	221	-04210	-2	3	AA					SP168
19	123	061278	-3230	15159	224	-03400	-2	3	AA					SP168
19	138	071278	-3738	14848	225	-03570	-2	3	AA					SP168
19	144	071278	-3101	15540	225	-14480	-3	3	AA					SP168
10	171	081278	-4046	14509	226	-04140	-2	3	AA					SP168
5	345	081278	-3504	15003	226	-15070	-3	3	AA	G	22	-04		SP168
5	232	180279	-3500	15621	298	-03170	-2	3	AA	G				K1488
19	040	200279	-3151	15441	300	-14430	-3	3	AA					K1488
19	041	200279	-3756	15304	300	-14450	-3	3	AA					K1488
10	074	260279	-3746	14514	306	-04030	-2	3	AA					K1488
5	140	010379	-3524	15519	309	-03200	-2	3	AA	G				K1488
15	157	180379	-3223	14922	326	-03380	-2	3	AA					SP029
19	368	220379	-3631	15626	330	-03120	-2	3	AA					SP039
19	366	220379	-3025	15451	330	-03140	-2	3	AA					SP039
5	318	230379	-3530	15136	331	-03300	-2	3	AA	G	31	11		SP039
22	226	270379	-3548	15744	335	-03050	-2	3	AA					SP039
11	132	270379	-3208	15647	335	-03060	-2	3	AA					SP039
22	224	270379	-2942	15611	335	-03070	-2	3	AA					SP039
11	130	270379	-2602	15519	335	-03080	-2	3	AA					SP039
15	033	020479	-3155	15423	341	-03170	-2	3	AA					SP049
15	204	080479	-3233	15113	347	-03270	-2	3	AA					SP049
19	039	120479	-3228	15726	351	-03020	-2	3	AA					SP049

NUMBER OF IMAGES PRIORITY AA, GROUP(1) = 119

GROUP(2), C/C TAPES HAVE BEEN ORDERED BUT NOT RECEIVED AS OF 31 AUG 80
FOR THE FOLLOWING IMAGES:

B	FR	DATE	LAT	LONG	DAY	HHMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
9	494	230578	-3854	15231	027	-04100	-2	3	AA	0				SP088
9	492	230578	-3249	15052	027	-04120	-2	3	AA	0				SP088
10	256	240578	-3700	15254	028	-15210	-3	3	AA	GO				SP088
9	615	090678	-3102	15407	044	-15190	-3	3	AA	0				SP098
9	616	090678	-3708	15231	044	-15200	-3	3	AA	0				SP098
8	006	170678	-3317	15806	052	-03400	-2	3	AA	GO				SP098
9	638	180678	-3147	15310	053	-03590	-2	3	AA	0				SP098
9	415	160778	-2937	15547	081	-15080	-3	2	AA	0				
9	416	160778	-3542	15413	081	-15090	-3	2	AA	0				
10	056	190778	-3057	15732	084	-03360	-2	3	AA	GO				SP108
11	130	210778	-3001	15716	086	-15010	-3	3	AA	0				SP108
9	047	230778	-3636	14632	088	-15380	-3	3	AA	0				SP108
2	436	240778	-3623	16033	089	-03280	-2	2	AA	GO				
9	004	250778	-3154	15450	090	-03470	-2	3	AA	0				SP108
9	002	250778	-2546	15321	090	-03490	-2	2	AA	0				
10	037	260778	-3651	15131	091	-04040	-2	3	AA	GO				SP108
10	035	260778	-3044	14955	091	-04050	-2	3	AA	GO				SP108
10	040	260778	-2644	15942	091	-14530	-3	2	AA	GO				
10	041	260778	-3250	15812	091	-14540	-3	3	AA	GO				SP108
10	039	270778	-3057	15408	092	-15120	-3	3	AA	GO				SP108
10	040	270778	-3702	15232	092	-15130	-3	3	AA	GO				SP108
10	311	310778	-3215	15154	096	-03580	-2	3	AA	GO				SP108
10	309	310778	-2607	15025	096	-03590	-2	2	AA	GO				
10	152	310778	-2723	16114	096	-14460	-3	2	AA	GO				
10	153	310778	-3330	15943	096	-14470	-3	3	AA	GO				SP108
10	073	020878	-3646	14946	098	-15240	-3	3	AA	GO				SP108

PRIORITY AA GROUP(2) CONTINUED

B	FR	DATE	LAT	LONG	DAY	HHMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
11	221	050878	-3540	16042	101	-14410-3	3	AA	0					SP118
10	003	090878	-2600	15810	105	-03270-2	3	AA	GO					SP118
10	018	100878	-3241	15516	106	-03430-2	3	AA	GO					SP118
10	049	110878	-2632	16009	107	-14490-3	3	AA	GO					SP118
10	050	110878	-3239	15840	107	-14510-3	3	AA	GO					SP118
11	038	130878	-3111	14956	109	-15260-3	3	AA	0					SP118
11	230	150878	-3748	15817	111	-03340-2	3	AA	0					SP118
11	228	150878	-3141	15640	111	-03360-2	3	AA	0					SP118
11	226	150878	-2532	15511	111	-03380-2	3	AA	0					SP118
10	046	160878	-3231	15220	112	-03540-2	3	AA	GO					SP118
10	044	160878	-2622	15051	112	-03560-2	3	AA	GO					SP118
9	014	160878	-2715	16137	112	-14420-3	3	AA	0					SP118
9	015	160878	-3322	16006	112	-14440-3	3	AA	0					SP118
9	035	170878	-3025	15618	113	-15010-3	3	AA	0					SP118
10	013	280878	-3109	15442	124	-15050-3	3	AA	GO					AXBT1
10	014	280878	-3716	15305	124	-15070-3	3	AA	GO					AXBT1
10	046	080978	-3047	15256	135	-15110-3	3	AA	GO					DM6A8
10	047	080978	-3654	15120	135	-15130-3	3	AA	GO					DM6A8
11	053	170978	-2736	16105	144	-14390-3	3	AA	0					DM6B8
11	055	170978	-3950	15752	144	-14420-3	3	AA	0					SP128
8	194	290978	-4220	15050	156	-15060-3	3	AA	GO	18	-06			SP138
5	145	080279	-3244	15209	288	-03320-2	3	AA	GO					AXBT3
5	008	100279	-3118	15142	290	-14570-3	3	AA	GO					K 5A8
5	009	100279	-3723	15005	290	-14580-3	3	AA	GO	38	-35			K 5A8
5	029	120279	-3429	15913	292	-03060-2	3	AA	GO	43	-25			K 5A8
5	027	120279	-2823	15741	292	-03080-2	3	AA	GO	259	-49			K 5A8
10	204	130279	-3155	15400	293	-03250-2	3	AA	GO					K 5A8
10	202	130279	-2548	15231	293	-03270-2	3	AA	GO					K 5A8
5	230	180279	-2853	15449	298	-03190-2	3	AA	GO	48	-35			K14B8
10	022	190279	-3211	15105	299	-03360-2	3	AA	GO					K14B8
10	095	210279	-3039	15000	301	-15010-3	3	AA	GO					K14B8
10	054	230279	-3301	15728	303	-03110-2	3	AA	GO					K14B8
10	052	230279	-2653	15558	303	-03120-2	3	AA	GO					K14B8
11	242	240279	-3544	15340	304	-03280-2	3	AA	0					K14B8
10	043	240279	-3252	15255	304	-03290-2	3	AA	GO					K14B8
10	041	240279	-2645	15124	304	-03300-2	3	AA	GO					K14B8
11	240	240279	-2938	15205	304	-03300-2	3	AA	0					K14B8
10	063	250279	-3020	15616	305	-14350-3	3	AA	GO					K14B8
10	064	250279	-3626	15441	305	-14370-3	3	AA	GO					K14B8
5	138	010379	-2917	15346	309	-03220-2	3	AA	GO					K14B8

NUMBER OF IMAGES PRIORITY AA, GROUP(2) = 66

GROUP(3), C/C TAPES HAVE BEEN RECEIVED FOR THE FOLLOWING IMAGES:

B	FR	DATE	LAT	LONG	DAY	HHMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
3	123	100678	-3711	14755	045	-15380-3	3	AA	GORSE	26	-11	6	90	SP098
3	018	110678	-3138	16048	046	-03290-2	3	AA	GORSE			6	105	SP098
3	309	120678	-3307	15637	047	-03470-2	3	AA	GORSE			6	125	SP098
3	307	120678	-2701	15508	047	-03480-2	3	AA	GORSE	125	-17	6	120	SP098
3	036	140678	-3131	15526	049	-15120-3	3	AA	GORSE	58	03	6	115	SP098
3	069	150678	-3238	15032	050	-15310-3	3	AA	GORSE	47	00	6	105	SP098
8	242	200678	-3004	15241	055	-15240-3	3	AA	GORSE	52	06	5	110	SP098
8	243	200678	-3611	15107	055	-15250-3	3	AA	GORSE	37	-07	5	100	SP098
2	168	160778	-3007	15540	081	-15080-3	2	AA	GORS	14	06			
2	169	160778	-3611	15405	081	-15090-3	2	AA	GORS	35	-09			

PRIORITY AA GROUP(3) CONTINUED

B	FR	DATE	LAT	LONG	DAY	HMM	TPP	PR	STATUS	POS	ERR	OR	MRT	TRUTH
2	004	180778	-2852	16134	083-03190-2	2	2	AA	GORSE			5	115	
2	027	210778	-2957	15717	086-15010-3	3	3	AA	GORSEC			4	125	SP108
11	131	210778	-3606	15541	086-15020-3	3	3	AA	ORSECP			2	90	SP108
2	012	220778	-2940	15250	087-15190-3	3	3	AA	GOR	53	10			SP108
11	028	220778	-3035	15236	087-15190-3	3	3	AA	ORSE			5	135	SP108
2	434	240778	-3016	15858	089-03290-2	3	3	AA	GORSE			5	125	SP108
2	041	010878	-3001	15602	097-15040-3	3	3	AA	GORSECP	53	04	2	110	SP108
2	042	010878	-3606	15428	097-15060-3	3	3	AA	GORSECP	34	-12	2	80	SP108
4	158	180878	-3626	15013	114-15200-3	3	3	AA	GORSEC	34	-08	4	65	SP118
4	015	290878	-3112	15005	125-15230-3	3	3	AA	GORSECP	45	-04	2	85	AXRT1
4	016	290878	-3719	14829	125-15250-3	3	3	AA	GORSECP	34	-06	2	65	AXRT1
4	056	160978	-3546	15725	143-03320-2	3	3	AA	GORSE			6	95	DM688
4	054	160978	-2940	15552	143-03340-2	3	3	AA	GORSE	58	-09	6	130	DM688
4	034	170978	-3314	15941	144-14100-3	3	3	AA	GOR					DM688
4	033	170978	-2707	16112	144-14390-3	3	3	AA	GORSE			6	120	DM688
11	054	170978	-3344	15934	144-14410-3	3	3	AA	ORSE			6	95	DM688
4	145	230978	-3323	15631	150-14520-3	3	3	AA	GORSE			6	95	SP128
4	146	230978	-3930	15450	150-14540-3	3	3	AA	GORSE			6	65	SP128
4	147	230978	-4535	15254	150-14560-3	3	3	AA	GORSE			6	30	SP128
4	233	250978	-4243	14238	152-04360-2	3	3	AA	GORSE			6	45	SP138
8	046	280978	-4607	15422	155-03520-2	3	3	AA	GORSE			6	5	SP138
11	011	280978	-4334	15330	155-03530-2	3	3	AA	RSE			6	50	SP138
11	022	290978	-4242	15043	156-15070-3	3	3	AA	ORSE			6	50	SP138
8	190	051078	-4613	14648	162-04220-2	3	3	AA	GORSE			6	30	SP138
8	042	161078	-4150	14356	173-04270-2	3	3	AA	GORSE	19	19	6	50	SP148
8	023	191078	-3332	15217	176-03460-2	3	3	AA	GORSE	24	03	6	110	SP148
8	034	201078	-3407	15423	177-14550-3	3	3	AA	GORSE	44	02	6	120	SP148
6	092	171178	-3034	15013	205-15120-3	3	3	AA	GORSE	59	08	6	135	SP158
6	135	191178	-3235	15701	207-03220-2	3	3	AA	GORSE			6	125	SP158
6	133	191178	-2628	15531	207-03240-2	3	3	AA	GORSE			6	140	SP158
6	114	241178	-2545	15643	212-03180-2	3	3	AA	GORSE			6	145	SP158
6	518	271178	-4019	14645	215-04090-2	3	3	AA	GORSE	19	14	6	85	SP158
6	037	011278	-3915	15224	219-03450-2	3	3	AA	GORSE			6	105	SP168
7	114	051278	-3301	15644	223-03220-2	3	3	AA	GORSE	51	01	6	135	SP166

NUMBER OF IMAGES PRIORITY AA, GROUP(3) = 44

NUMBER OF IMAGES PRIORITY AA= 229

THESE IMAGES ARE NEEDED FOR THE PRINCIPAL AIMS OF HCM-051.

IMAGE STATUS DATA ARE DIVIDED INTO THREE GROUPS FOR THIS PRIORITY. THESE GROUPS ARE FOR CCT DATA WHICH (1) HAVE NOT YET BEEN ORDERED, (2) HAVE BEEN ORDERED BUT NOT YET RECEIVED AND (3) HAVE BEEN RECEIVED. STATUS DATA CAN BE INTERPRETED AS FOLLOWS: "G"= GRID MADE, "O"= CCT ORDERED, "R"= CCT RECEIVED, "S"= IMAGE STATISTICS OBTAINED, "E"= IMAGE ENHANCED DIGITALLY, "C"= CSIRO ENHANCED PHOTO, IMAGE GENERATED, "P"= ENHANCED PHOTO, PRINTED. THE ABSENCE OF APPROPRIATE LETTERS INDICATES THE NEGATIVE.

GROUP(1), C/C TAPES HAVE NOT YET BEEN ORDERED FOR THE FOLLOWING IMAGES:

R	FR	DATE	LAT	LONG	DAY	HHMM	TPP	PR	STATUS	POS	ERR	OR	MRT	TRUTH
15	168	140578	-2647	15245	018	-15310	-3	2	A					
15	169	140578	-3255	15115	018	-15320	-3	2	A					
16	327	160578	-3019	15804	020	-03430	-2	2	A					
9	490	230578	-2642	14923	027	-04140	-2	2	A					
22	144	230578	-2618	16011	027	-15000	-3	2	A					
16	224	270578	-2942	15603	031	-03490	-2	2	A					
16	246	280578	-2608	15038	032	-04080	-2	2	A					
16	240	280578	-2736	16116	032	-14540	-3	2	A					
16	265	290578	-3018	15602	033	-15130	-3	2	A					
3	006	030678	-3622	15002	038	-04170	-2R3	A						SP088
18	112	030678	-3059	15716	038	-15070	-3	2	A					
22	216	050678	-2549	14922	040	-15420	-3	2	A					
22	035	060678	-2532	15755	041	-03370	-2	2	A					
3	037	140678	-3737	15349	049	-15140	-3R3	A						SP098
3	025	180678	-3012	16145	053	-14470	-3R3	A						SP098
3	026	180678	-3619	16010	053	-14490	-3R3	A						SP098
3	041	190678	-3037	15704	054	-15060	-3R3	A						SP098
3	042	190678	-3643	15528	054	-15070	-3R3	A						SP098
9	088	220678	-2700	15802	057	-03350	-2	2	A					
19	074	040778	-2827	16205	069	-14450	-3	2	A					
19	075	040778	-3433	16033	069	-14470	-3	2	A					
19	140	050778	-3037	15702	070	-15040	-3	2	A					
10	226	240878	-2542	15002	120	-15280	-3	2	A					
11	008	020978	-3630	14850	129	-04090	-2	2	A					
8	063	050978	-3249	15825	132	-03270	-2R3	A						DM6A8
8	036	170978	-4526	15606	144	-14440	-3R3	A						SP128
8	253	180978	-4157	15005	145	-04070	-2R3	A						SP128
19	067	210978	-3250	15805	148	-03260	-2	2	A					
19	065	210978	-2645	15636	148	-03280	-2	2	A					
19	075	220978	-3454	16041	149	-14350	-3	2	A					
5	037	240978	-3644	15103	151	-15110	-3	2	A	G	34	05		
17	140	270978	-3307	15502	154	-03380	-2	2	A					
17	138	270978	-2701	15333	154	-03400	-2	2	A					
14	057	280978	-2607	15945	155	-14440	-3	2	A					
4	138	280978	-4419	15447	155	-14490	-3R3	A						SP138
11	025	300978	-3117	14921	157	-15220	-3	2	A					
21	008	011078	-3117	16038	158	-03140	-2	2	A					
8	174	031078	-4526	15555	160	-14420	-3R3	A						SP138
19	062	041078	-3529	14804	161	-04070	-2	2	A					
4	158	051078	-4526	14647	162	-15190	-3R3	A						SP138
19	052	061078	-2908	16138	163	-03080	-2	2	A					
19	042	071078	-3133	15740	164	-03250	-2	2	A					

PRIORITY A GROUP (1) CONTINUED

B	FR	DATE	LAT	LONG	DAY	HMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
19	084	081078	-3443	16038	164-14330-3	2	2	A						
22	075	081078	-3243	15327	165-03430-2	2	2	A						
22	073	081078	-2637	15156	165-03440-2	2	2	A						
21	064	091078	-3335	14906	166-04010-2	2	2	A						
19	116	091078	-3201	15648	166-14500-3	2	2	A						
21	074	101078	-2559	15343	167-15060-3	2	2	A						
21	075	101078	-3206	15213	167-15080-3	2	2	A						
17	142	131078	-2619	15324	170-03380-2	2	2	A						
19	064	141078	-2642	15941	171-14420-3	2	2	A						
19	065	141078	-3249	15811	171-14430-3	2	2	A						
21	039	161078	-2539	15051	173-15170-3	2	2	A						
8	025	191078	-3937	15358	176-03450-2R3			A						SP148
21	095	191078	-3114	16012	176-14360-3	2	2	A						
8	035	201078	-4211	15237	177-14570-3R3			A						SP148
17	118	251078	-3249	14913	182-03570-2	2	2	A						
19	251	271078	-2626	14928	184-15210-3	2	2	A						
11	101	311078	-2632	15543	188-14550-3	2	2	A						
19	097	011178	-3646	14837	189-15160-3	2	2	A						
19	268	051178	-3620	15501	193-14500-3	2	2	A						
21	107	061178	-3654	15023	194-15080-3	2	2	A						
20	020	081178	-2913	15807	196-03170-2	2	2	A						
17	129	101178	-2655	15904	198-14410-3	2	2	A						
19	056	021278	-3017	15423	220-14540-3	2	2	A						
19	121	061278	-2623	15028	224-03420-2	2	2	A						
7	154	061278	-3926	15758	224-14320-3R3			A						SP168
19	060	161278	-3114	15437	234-03270-2	2	2	A						
19	051	181278	-3110	15402	236-14520-3	2	2	A						
19	011	211278	-3215	15627	239-03200-2	2	2	A						
19	011	211278	-2608	15457	239-03220-2	2	2	A						
19	014	271278	-2619	15159	245-03330-2	2	2	A						
19	104	291278	-3135	15229	247-14570-3	2	2	A						
19	039	301278	-3358	14722	248-15150-3	2	2	A						
10	124	010179	-3559	15604	250-03230-2	2	2	A G						
10	122	010179	-2953	15430	250-03250-2	2	2	A G						
11	022	020179	-3157	15029	251-03430-2	2	2	A						
10	289	020179	-2638	15953	251-14300-3	2	2	A G						
10	290	020179	-3247	15823	251-14320-3	2	2	A G						
10	010	030179	-3555	14659	252-03590-2	2	2	A						
10	015	030179	-2603	15532	252-14400-3	2	2	A						
10	016	030179	-3211	15402	252-14500-3	2	2	A G						
10	038	060179	-3255	15654	255-03170-2	2	2	A G						
10	036	060179	-2649	15523	255-03190-2	2	2	A G						
10	029	070179	-3014	16042	256-14240-3	2	2	A G						
19	104	080179	-3316	14756	257-03530-2	2	2	A						
19	035	090179	-2655	15259	258-14590-3	2	2	A						
19	036	090179	-3303	15128	258-15010-3	2	2	A						
10	137	110179	-3241	15902	260-03100-2	2	2	A G						
10	135	110179	-2635	15732	260-03110-2	2	2	A G						
10	033	130179	-2701	15914	262-14330-3	2	2	A G						
10	034	130179	-3308	15742	262-14350-3	2	2	A G						
15	311	140179	-3023	15352	263-14520-3	2	2	A						
15	312	140179	-3630	15216	263-14540-3	2	2	A						
9	057	160179	-3156	16036	265-03020-2	2	2	A						
9	055	160179	-2550	15907	265-03040-2	2	2	A						
19	059	170179	-3059	15552	266-03200-2	2	2	A						
10	048	180179	-2714	16056	267-14260-3	2	2	A G						

PRIORITY A GROUP(1) CONTINUED

B	FR	DATE	LAT	LONG	DAY	HMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
10	049	180179	-3321	15924	267	-14270	-3 2	A						
19	151	190179	-3612	14813	268	-03550	-2 2	A						
10	116	190179	-3027	15537	268	-14440	-3 2	A G						
10	444	210179	-2943	16142	270	-02560	-2 2	A G						
11	230	230179	-3311	15249	272	-03310	-2 2	A						
11	228	230179	-2705	15120	272	-03330	-2 2	A						
18	036	230179	-2719	16149	272	-14200	-3 2	A						
18	043	240179	-3638	14910	273	-03490	-2 2	A						
18	049	240179	-3025	15624	273	-14390	-3 2	A						
18	050	240179	-3632	15449	273	-14400	-3 2	A						
20	137	250179	-3028	15149	274	-14570	-3 2	A						
20	138	250179	-3634	15014	274	-14590	-3 2	A						
10	084	280179	-3251	15404	277	-03260	-2 2	A G						
19	164	290179	-3346	14943	278	-03440	-2 2	A						
15	013	290179	-3101	15734	278	-14330	-3 2	A						
11	145	300179	-3632	15132	279	-14530	-3 2	A						
14	109	310179	-3650	14649	280	-15110	-3 2	A						
5	132	020279	-3252	15523	282	-03200	-2 2	A G		109	-09			
5	130	020279	-2646	15355	282	-03210	-2 2	A G		134	-24			
9	090	030279	-3253	15050	283	-03380	-2 2	A						
9	088	030279	-2647	14919	283	-03390	-2 2	A						
10	090	040279	-3011	15432	284	-14450	-3 2	A G						
10	091	040279	-3617	15258	284	-14470	-3 2	A						
10	062	050279	-3637	14818	285	-15050	-3 2	A						
5	189	190279	-3129	15917	299	-14250	-3R3	A						K1488
5	190	190279	-3734	15741	299	-14270	-3R3	A						K1488
15	031	020479	-2547	15255	341	-03190	-2 2	A						
15	202	080479	-2626	14944	347	-03290	-2 2	A						
19	037	120479	-2623	15559	351	-03040	-2 2	A						
19	051	130479	-3549	15343	352	-03190	-2 2	A						
19	049	130479	-2944	15209	352	-03210	-2 2	A						
19	087	140479	-3239	14812	353	-03390	-2 2	A						
14	045	230479	-2750	15354	362	-03110	-2 2	A						
14	043	240479	-3620	15126	363	-03270	-2 2	A						
11	012	280479	-2708	15458	367	-03060	-2 2	A						
14	036	030579	-3253	15736	372	-02590	-2 2	A						
14	034	030579	-2649	15607	372	-03010	-2 2	A						
10	278	040579	-2616	15126	373	-03190	-2 2	A						
11	014	090579	-3034	15346	378	-03120	-2 2	A						

NUMBER OF IMAGES PRIORITY A. GROUP(1) = 137

GROUP(2). C/C TAPES HAVE BEEN ORDERED BUT NOT RECEIVED AS OF 31 AUG 80
FOR THE FOLLOWING IMAGES:

B	FR	DATE	LAT	LONG	DAY	HMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
10	255	240578	-3052	15430	028	-15190	-3 2	A GO						
9	090	220678	-3307	15931	057	-03340	-2 2	A G						
5	051	060778	-3612	15102	071	-15230	-3 2	A GO						
10	061	200878	-3008	15757	116	-03290	-2 2	A GO						
4	121	220878	-3054	15752	118	-14530	-3 2	A GO						
10	061	270878	-3200	15053	123	-03580	-2 2	A GO						
10	068	270878	-2714	16014	123	-14460	-3 2	A GO						
10	069	270878	-3322	15844	123	-14470	-3 2	A GO						
5	036	240978	-3037	15239	151	-15100	-3 2	A GO		53	11			
8	042	280978	-3400	15043	155	-03560	-2 2	A GO		35	04			

PRIORITY A GROUP(2) CONTINUED

R	FR	DATE	LAT	LONG	DAY	HMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
11	020	290978	-3030	15407	156-15030-3	2	2	A	0					
11	021	290978	-3637	15231	156-15050-3	2	2	A	0					
5	212	031078	-3312	15201	160-03490-2	2	2	A	60	36	05			
5	210	031078	-2707	15030	160-03510-2	2	2	A	60	104	04			
5	155	051078	-2710	15154	162-15140-3	2	2	A	60	114	11			
5	156	051078	-3317	15023	162-15150-3	2	2	A	60	52	08			
8	127	301078	-2614	16017	187-14370-3	2	2	A	60					
11	107	301078	-3257	15838	187-14390-3	2	2	A	0					
5	344	081278	-2858	15137	226-15050-3	2	2	A	60	52	04			
11	058	191278	-2622	15040	237-15090-3	2	2	A	0					
11	059	191278	-3229	14910	237-15110-3	2	2	A	0					
10	068	060279	-2856	16022	286-02560-2	2	2	A	60					

NUMBER OF IMAGES PRIORITY A, GROUP(2) = 22

GROUP(3), C/C TAPES HAVE BEEN RECEIVED FOR THE FOLLOWING IMAGES:

R	FR	DATE	LAT	LONG	DAY	HMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
R	021	150578	-3617	14546	019-15520-3	2	2	A	GORSEC	20	-20	4	65	
3	016	110678	-2531	15921	046-03310-2	2	2	A	GORSE			6	135	
3	153	240678	-3359	15743	059-15000-3	2	2	A	GORSE			6	105	
3	147	250678	-2959	15410	060-15170-3	2	2	A	GORSEC	53	07	4	115	
R	105	270678	-3313	16102	062-03270-2	2	2	A	GORSECP			3	95	
R	103	270678	-2706	15932	062-03290-2	2	2	A	GORSECP			3	115	
3	049	280678	-3320	15631	063-03450-2	2	2	A	GORSECP			3	100	
3	047	280678	-2714	15501	063-03470-2	2	2	A	GORSECP	114	-14	3	125	
3	079	300678	-3028	15533	065-15100-3	2	2	A	GORSECP	56	04	3	115	
R	027	020778	-2649	16100	067-03220-2	2	2	A	GORSECP			3	125	
2	205	040778	-3341	15334	069-03560-2	2	2	A	GORSEC			3	120	
2	203	040778	-2734	15204	069-03580-2	2	2	A	GORSECP			3	120	
4	135	210878	-3623	15502	117-03450-2	2	2	A	GORSEC			4	95	
4	133	210878	-3016	15326	117-03470-2	2	2	A	GORSECP	103	-01	1	125	
11	136	220878	-3123	15744	118-14540-3	2	2	A	ORSE			5	110	
4	176	230878	-3021	15328	119-15110-3	2	2	A	GORSE	55	04	5	105	
4	177	230878	-3628	15153	119-15130-3	2	2	A	GORSE	33	-06	5	90	
4	144	230978	-2716	15802	150-14510-3	2	2	A	GORSE			6	120	
4	238	250978	-3655	14625	152-15300-3	2	2	A	GORSE	20	-05	6	65	
4	244	260978	-3234	15928	153-03200-2	2	2	A	GORSE			6	100	
4	242	260978	-2628	15758	153-03220-2	2	2	A	GORSE			6	130	
R	192	290978	-3008	15413	156-15030-3	2	2	A	GORSE	57	09	6	100	
R	193	290978	-3615	15237	156-15050-3	2	2	A	GORSE	35	01	6	95	
R	021	191078	-2726	15045	176-03480-2	2	2	A	GORSE	57	-05	6	135	
R	033	201078	-3001	15558	177-14530-3	2	2	A	GORSE	51	06	6	120	
R	015	251078	-3047	15728	182-14460-3	2	2	A	GORSE			6	125	
R	016	251078	-3653	15552	182-14480-3	2	2	A	GORSE			6	115	
R	030	261078	-3122	15248	183-15040-3	2	2	A	GORSE	109	08	6	125	
11	106	301078	-2650	16008	187-14380-3	2	2	A	RSE			6	120	
R	128	301078	-3220	15947	187-14390-3	2	2	A	GORSE			6	105	
1	138	141178	-2704	15422	202-03300-2	2	2	A	GORSE	118	-14	6	155	
6	120	151178	-2625	16027	203-14350-3	2	2	A	GORSE			6	150	
6	121	151178	-3231	15857	203-14360-3	2	2	A	GORSE			6	120	
6	116	241178	-3153	15812	212-03170-2	2	2	A	GORSE			6	140	
6	007	291178	-3646	16052	217-03090-2	2	2	A	GORSE			6	125	
6	005	291178	-3039	15915	217-03110-2	2	2	A	GORSE			6	135	
7	152	061278	-2713	16109	224-14280-3	2	2	A	GORSE			6	135	
7	153	061278	-3320	15938	224-14300-3	2	2	A	GORSE			6	125	

PRIORITY A GROUP(3) CONTINUED

B	FR	DATE	LAT	LONG	DAY	HMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
3	301	121278	-2607	15819	230-14400-3	2	A	GORSE				6	170	
7	011	191278	-2552	15047	237-15090-3	2	A	GORSE	100	01		6	160	
7	012	191278	-3200	14917	237-15110-3	2	A	GORSE	43	04		6	125	

NUMBER OF IMAGES PRIORITY A: GROUP(3) = 41

NUMBER OF IMAGES PRIORITY A= 200

THESE IMAGES ARE DESIRABLE FOR LONG TERM AIMS OF HCM-051.

IMAGE STATUS DATA ARE DIVIDED INTO THREE GROUPS FOR THIS PRIORITY. THESE GROUPS ARE FOR CCT DATA WHICH (1) HAVE NOT YET BEEN ORDERED, (2) HAVE BEEN ORDERED BUT NOT YET RECEIVED AND (3) HAVE BEEN RECEIVED. STATUS DATA CAN BE INTERPRETED AS FOLLOWS: "GN"= GRID MADE, "ON"= CCT ORDERED, "RN"= CCT RECEIVED, "SN"= IMAGE STATISTICS OBTAINED, "EN"= IMAGE ENHANCED DIGITALLY, "CH"= CSIRO ENHANCED PHOTO, IMAGE GENERATED, "PN"= ENHANCED PHOTO, PRINTED. THE ABSENCE OF APPROPRIATE LETTERS INDICATES THE NEGATIVE.

GROUP(1), C/C TAPES HAVE NOT YET BEEN ORDERED FOR THE FOLLOWING IMAGES:

R	FR	DATE	LAT	LONG	DAY	HHMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
15	180	110578	-3832	15833	015	03460	-2	1	B					
16	024	120578	-3734	15911	016	14570	-3	1	B					
16	025	120578	-4340	15721	016	14590	-3	1	B					
15	165	130578	-4334	15113	017	04210	-2	1	B					
15	163	130578	-3729	14924	017	04230	-2	1	B					
15	170	140578	-3902	14935	018	15340	-3	1	B					
15	233	200578	-4151	14251	024	04520	-2	1	B					
22	144	230578	-4439	15509	027	15050	-3	1	B					
10	126	250578	-4720	14602	029	04450	-2	1	B					
20	022	290578	-4541	15125	033	04210	-2	1	B					
15	366	300578	-4734	14731	034	04380	-2	1	B					
22	039	060678	-3743	16059	041	03340	-2	1	B					
10	151	100678	-4058	14357	045	04450	-2	1	B					
3	221	210678	-3638	14625	056	15430	-3R2		B					
3	148	250678	-3605	15236	060	15190	-3R2		B					
A	022	290678	-3122	15952	064	14520	-3R2		B					
10	208	010778	-4023	14447	066	04370	-2	1	B					
A	122	030778	-3130	15734	068	03390	-2P2		B					
19	076	040778	-4037	15850	069	14480	-3	1	B					
9	482	050778	-3722	15001	070	04130	-2	1	B					
19	142	050778	-4246	15338	070	15070	-3	1	B					
2	050	060778	-3007	15237	071	15210	-3R2		B					
5	052	060778	-4216	14916	071	15250	-3	1	B	G	26	00		
22	557	070778	-4213	14220	072	04480	-2	1	B					
1A	058	070778	-3724	14610	072	15420	-3	1	B					
1A	059	070778	-4328	14420	072	15430	-3	1	B					
19	084	080778	-3726	16041	073	03300	-2	1	B					
21	139	090778	-4325	15929	074	14420	-3	1	B					
20	008	100778	-4513	15357	075	04040	-2	1	B					
20	006	100778	-3908	15204	075	04060	-2	1	B					
1A	110	110778	-4715	15007	076	04220	-2	1	B					
1A	108	110778	-4111	14806	076	04240	-2	1	B					
17	409	120778	-4047	14326	077	04420	-2	1	B					
9	467	120778	-4339	14546	077	15360	-3	1	B					
19	015	150778	-3845	15754	080	14520	-3	1	B					
19	016	150778	-4444	15601	080	14540	-3	1	B					
9	417	160778	-4146	15227	081	15110	-3	1	B					
9	429	170778	-4550	14638	082	04330	-2	1	B					
9	433	170778	-4333	14722	082	15290	-3	1	B					
9	037	220778	-4203	14659	087	04270	-2	1	B					
9	048	230778	-4240	14444	088	15400	-3	1	B					
9	008	250778	-4407	15819	090	03440	-2	1	B					

B	FR	DATE	LAT	LONG	DAY	HHMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
9	006	250778	-3801	15628	090	03450	-2	1	B					
16	032	250778	-4257	15949	090	14390	-3	1	B					
10	039	260778	-4257	15319	091	04020	-2	1	B					
10	042	260778	-3855	15632	091	14560	-3	1	B					
10	027	270778	-4230	14838	092	04200	-2	1	B					
10	041	270778	-4306	15044	092	15150	-3	1	B					
10	607	280778	-4344	14600	093	15330	-3	1	B					
16	308	300778	-4238	15921	095	03370	-2	1	B					
10	154	310778	-3935	15803	096	14490	-3	1	B					
10	068	020878	-4050	14511	098	04310	-2	1	B					
10	074	020878	-4250	14759	098	15260	-3	1	B					
19	027	050878	-4213	15619	101	03480	-2	1	B					
10	022	100878	-4453	15849	106	03400	-2	1	B					
10	020	100878	-3848	15655	106	03410	-2	1	B					
19	210	120878	-4804	15010	108	04150	-2	1	B					
21	017	120878	-4242	15114	108	15110	-3	1	B					
19	016	120878	-4318	15103	108	15120	-3	1	B					
11	040	130878	-4323	14630	109	15300	-3	1	B					
11	232	150878	-4353	16008	111	03330	-2	1	B					
9	031	170878	-4211	15032	113	04090	-2	1	B					
9	037	170878	-4237	15255	113	15040	-3	1	B					
10	015	280878	-4321	15116	124	15080	-3	1	B					
11	010	020978	-4235	15038	129	04070	-2	1	B					
8	061	050978	-2642	15655	132	03290	-2R2		B					
10	017	060978	-4521	15730	133	03420	-2	1	B					
10	029	060978	-4632	15735	133	14390	-3	1	B					
10	048	080978	-4300	14932	135	15140	-3	1	B					
10	003	090978	-3858	14609	136	15310	-3	1	B					
19	073	130978	-4708	15023	140	04120	-2	1	B					
19	071	130978	-4105	14823	140	04130	-2	1	B					
19	069	210978	-3855	15944	148	03250	-2	1	B					
19	076	220978	-4100	15857	149	14360	-3	1	B					
17	142	270978	-3911	15642	154	03360	-2	1	B					
4	136	280978	-3208	15817	155	14460	-3R2		B					
5	214	031078	-3916	15341	160	03480	-2	1	B	G				
8	171	031078	-2709	16101	160	14370	-3R2		B					
8	172	031078	-3316	15930	160	14390	-3R2		B					
5	157	051078	-3922	14843	162	15170	-3	1	B	G				
19	044	071078	-3738	15918	164	03230	-2	1	B					
22	079	081078	-4450	15700	165	03390	-2	1	B					
22	077	081078	-3847	15507	165	03410	-2	1	B					
19	085	081078	-4047	15855	165	14340	-3	1	B					
21	066	091078	-3940	15047	166	03590	-2	1	B					
19	117	091078	-3807	15510	166	14520	-3	1	B					
21	076	101078	-3812	15035	167	15100	-3	1	B					
21	077	101078	-4416	14843	167	15110	-3	1	B					
19	067	141078	-4458	15437	171	14470	-3	1	B					
21	096	191078	-3720	15835	176	14370	-3	1	B					
10	266	211078	-4029	14509	178	04210	-2	1	B					
17	120	251078	-3854	15053	182	03560	-2	1	B					
19	253	271078	-3837	14620	184	15240	-3	1	B					
19	254	271078	-4441	14428	184	15260	-3	1	B					
8	137	311078	-3038	15444	188	14560	-3R2		B					
11	103	311078	-3843	15234	188	14590	-3	1	B					
19	098	011178	-4250	14649	189	15180	-3	1	B					
19	269	051178	-4225	15315	193	14520	-3	1	B					

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PRIORITY R GROUP(1) CONTINUED

B	FR	DATE	LAT	LONG	DAY	HHMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
21	108	061178	-4258	14835	194	-15100	-3	1	B					
17	132	101178	-4509	15401	198	-14460	-3	1	B					
8	016	111178	-3005	15341	199	-15000	-3R2	R						
6	017	111178	-3611	15206	199	-15010	-3R2	R						
22	039	121178	-3733	14707	200	-15200	-3	1	B					
11	018	161178	-4159	14910	204	-04020	-2	1	B					
19	018	161178	-4300	15123	204	-14570	-3	1	R					
21	116	211178	-4646	15205	209	-03550	-2	1	B					
20	118	211178	-4315	15237	209	-14510	-3	1	B					
14	536	221178	-4619	14720	210	-04130	-2	1	R					
22	059	221178	-4414	14743	210	-15100	-3	1	H					
21	308	261178	-4447	15245	214	-03500	-2	1	B					
19	149	261178	-4302	15403	214	-14450	-3	1	R					
6	033	011278	-2701	14912	219	-03480	-2R2	B						
19	058	021278	-4229	15102	220	-14570	-3	1	B					
19	094	031278	-4310	14614	221	-15150	-3	1	R					
7	112	051278	-2653	15513	223	-03240	-2R2	B						
5	346	081278	-4110	14819	226	-15080	-3	1	B G					
19	129	141278	-4156	14225	232	-04260	-2	1	R					
19	052	181278	-3717	15225	236	-14540	-3	1	R					
19	013	211278	-3821	15805	239	-03190	-2	1	H					
19	020	271278	-4435	15701	245	-03280	-2	1	R					
19	018	271278	-3831	15508	245	-03300	-2	1	B					
7	008	271278	-3407	16058	245	-14210	-3R2	B						
19	105	291278	-3743	15052	247	-14580	-3	1	B					
19	040	301278	-4004	14539	248	-15170	-3	1	H					
10	126	010179	-4203	15750	250	-03220	-2	1	B					
11	026	020179	-4407	15357	251	-03390	-2	1	R					
11	024	020179	-3802	15206	251	-03410	-2	1	R					
10	291	020179	-3853	15643	251	-14340	-3	1	R					
10	292	020179	-4459	15449	251	-14350	-3	1	R					
10	012	030179	-4200	14844	252	-03580	-2	1	R					
10	017	030179	-3814	15222	252	-14510	-3	1	H					
10	018	030179	-4423	15029	252	-14530	-3	1	R					
10	098	040179	-4104	14356	253	-04160	-2	1	R					
10	040	060179	-3900	15834	255	-03150	-2	1	R G					
10	031	070179	-4226	15720	256	-14270	-3	1	R					
19	108	080179	-4525	15131	257	-03500	-2	1	R					
19	106	080179	-3921	14937	257	-03510	-2	1	R					
19	111	080179	-3708	15422	257	-14440	-3	1	B					
19	112	080179	-4313	15234	257	-14450	-3	1	H					
19	037	090179	-3910	14947	258	-15020	-3	1	R					
19	038	090179	-4515	14752	258	-15040	-3	1	R					
10	126	100179	-4231	14204	259	-04260	-2	1	H					
10	131	100179	-3829	14528	259	-15200	-3	1	R					
10	139	110179	-3846	16041	260	-03080	-2	1	R					
10	066	130179	-3746	15124	262	-03440	-2	1	H					
11	430	140179	-4005	14733	263	-04010	-2	1	R					
15	313	140179	-4236	15028	263	-14560	-3	1	R					
10	068	150179	-4717	14523	264	-04170	-2	1	B					
10	066	150179	-4114	14325	264	-04190	-2	1	R					
9	051	150179	-3735	14727	264	-15120	-3	1	R					
9	052	150179	-4340	14537	264	-15140	-3	1	R					
19	061	170179	-3704	15728	266	-03190	-2	1	R					
10	045	180179	-4413	15506	267	-03350	-2	1	R					
10	043	180179	-3810	15316	267	-03360	-2	1	B G					

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PRIORITY R GROUP(1) CONTINUED

B	FR	DATE	LAT	LONG	DAY	HHMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
10	050	180179	-3928	15742	267	-14290	-3	1	B					
19	153	190179	-4216	14959	268	-03530	-2	1	B					
9	019	200179	-3826	14855	269	-15050	-3	1	B					
9	020	200179	-4431	14702	269	-15070	-3	1	B					
11	234	230179	-4519	15623	272	-03280	-2	1	B					
11	232	230179	-3916	15429	272	-03300	-2	1	B					
18	045	240179	-4242	15057	273	-03470	-2	1	B					
18	051	240179	-4237	15302	273	-14420	-3	1	B					
5	126	250179	-3932	14523	274	-04060	-2	1	B G	11	16			
20	139	250179	-4238	14927	274	-15000	-3	1	B					
19	151	260179	-4158	14402	275	-15180	-3	1	B					
10	088	280179	-4500	15735	277	-03220	-2	1	B					
10	086	280179	-3856	15543	277	-03240	-2	1	B					
19	168	290179	-4554	15318	278	-03400	-2	1	B					
19	166	210979	-3951	15123	278	-03420	-2	1	B					
14	010	300179	-4655	14903	279	-03580	-2	1	B					
14	008	300179	-4052	14705	279	-04000	-2	1	B					
11	146	300179	-4237	14946	279	-14540	-3	1	B					
14	110	310179	-4255	14502	280	-15130	-3	1	B					
5	136	020279	-4501	15855	282	-03160	-2	1	B G					
5	134	020279	-3857	15702	282	-03180	-2	1	B G					
9	094	030279	-4502	15421	283	-03340	-2	1	B					
9	092	030279	-3858	15229	283	-03360	-2	1	B					
10	143	040279	-4306	14908	284	-03530	-2	1	B					
10	092	040279	-4222	15112	284	-14480	-3	1	B					
10	057	050279	-4126	14402	285	-04120	-2	1	B					
10	063	050279	-4241	14631	285	-15070	-3	1	B					
10	218	140279	-3849	15118	294	-03410	-2	1	B G					
10	026	190279	-4422	15435	299	-03330	-2	1	B					
19	042	200279	-4400	15113	300	-14470	-3	1	B					
10	056	230279	-3907	15908	303	-03090	-2	1	B					
11	244	240279	-4150	15526	304	-03260	-2	1	B					
10	076	260279	-4350	14705	306	-04020	-2	1	B G					
15	161	180379	-4434	15252	326	-03340	-2	1	B					
15	159	180379	-3829	15101	326	-03360	-2	1	B					
14	134	190379	-4628	14858	327	-03520	-2	1	B					
14	132	190379	-4623	14701	327	-03540	-2	1	B					
21	008	240379	-4201	14856	332	-03470	-2	1	B					
5	105	300379	-4017	14524	338	-03580	-2	1	B G	18	01			
15	206	080479	-3838	15250	347	-03260	-2	1	B					
15	220	090479	-4620	15047	348	-03410	-2	1	B					
15	218	090479	-4016	14850	348	-03430	-2	1	B					
19	041	120479	-3833	15904	351	-03000	-2	1	B					
19	053	130479	-4154	15528	352	-03180	-2	1	B					
19	091	140479	-4447	15143	353	-03350	-2	1	B					
19	089	140479	-3844	14950	353	-03370	-2	1	B					
14	049	230479	-4001	15705	362	-03080	-2	1	B					
5	152	290479	-4131	15411	368	-03200	-2	1	B G					
5	148	290479	-2922	15054	368	-03240	-2R2	1	B					
5	162	300479	-4012	14910	369	-03390	-2	1	B G	15	12			
19	006	010579	-3828	14404	370	-03580	-2	1	B					
14	038	030579	-3859	15916	372	-02570	-2	1	B					
10	284	040579	-4429	15622	373	-03140	-2	1	B					
9	163	050579	-4228	15109	374	-03330	-2	1	B					

NUMBER OF IMAGES PRIORITY R. GROUP(1) = 208

PRIORITY B GROUP(2)

GROUP(2), C/C TAPES HAVE BEEN ORDERED BUT NOT RECEIVED AS OF 31 AUG 80
FOR THE FOLLOWING IMAGES:

B	FR	DATE	LAT	LONG	DAY	HHMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
8	008	170678	-3922	15945	052	-03390	-3	1	B GO					
11	132	210778	-4210	15355	086	-15040	-3	1	B 0					
10	313	310778	-3822	15332	096	-03560	-2	1	B GO					
10	051	110878	-3845	15701	107	-14520	-3	1	B GO					
10	048	160878	-3837	15359	112	-03520	-2	1	B GO					
11	004	180878	-4242	14822	114	-15220	-3	1	B 0					
10	228	240878	-3756	14656	120	-15310	-3	1	B GO					
10	063	270878	-3805	15231	123	-03560	-2	1	B GO					
10	015	060978	-3917	15536	133	-03440	-2	1	B GO					
4	246	260978	-3839	16108	153	-03180	-2	1	B GO					
8	044	280978	-4004	15225	155	-03540	-2	1	B GO			22	-09	
11	026	300978	-3723	14744	157	-15230	-3	1	B 0					
11	060	191278	-3836	14731	237	-15120	-3	1	B 0					
5	159	100279	-4046	14549	290	-04050	-2	1	B GO			28	-21	
10	024	190279	-3817	15243	299	-03340	-2	1	B GO					
10	045	240279	-3858	15434	304	-03270	-2	1	B GO					
10	057	250279	-3818	14952	305	-03450	-2	1	B GO					

NUMBER OF IMAGES PRIORITY B, GROUP(2) = 17

GROUP(3), C/C TAPES HAVE BEEN RECEIVED FOR THE FOLLOWING IMAGES:

B	FR	DATE	LAT	LONG	DAY	HHMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
3	267	200678	-4014	14619	055	-04330	-2	1	B GORSE			6	65	
8	244	200678	-4216	14920	055	-15270	-3	1	B GORSE	12	-07	5	70	
8	113	230678	-4650	15820	058	-14450	-3	1	B GORSEC	00	00	4	65	
2	209	040778	-4550	15710	069	-03530	-2	1	B GORSEC			4	25	
2	207	040778	-3946	15514	069	-03550	-2	1	B GORSECP			3	70	
2	003	100778	-3940	15609	075	-14590	-3	1	B GORSECP			3	65	
2	004	100778	-4543	15413	075	-15010	-3	1	B GORSEC			4	35	
2	043	010878	-4211	15241	097	-15080	-3	1	B GOR	13	-12			
4	159	180878	-4231	14826	114	-15220	-3	1	B GORSEC	19	-06	4	30	
4	137	210878	-4228	15649	117	-03440	-2	1	B GORSEC			4	45	
4	117	210878	-4025	15947	117	-14380	-3	1	B GORSE			5	55	
4	118	210878	-4630	15749	117	-14400	-3	1	B GORSE			5	25	
4	123	220878	-4306	15426	118	-14570	-3	1	B GORSEC			4	35	
4	178	230878	-4234	15005	119	-15150	-3	1	B GORSE	23	-03	5	35	
4	017	290878	-4325	14639	125	-15270	-3	1	B GORSEC	15	-06	4	40	
4	235	070978	-4517	15253	134	-04000	-2	1	B GORSE			5	45	
4	241	070978	-4258	15407	134	-14560	-3	1	B GORSE			5	35	
4	012	120978	-4143	15552	139	-14490	-3	1	B GORSE			5	60	
4	035	170978	-3921	15801	144	-14420	-3	1	B GORSE			6	60	
11	009	280978	-3731	15140	155	-03550	-2	1	B RSE			6	105	
8	151	300978	-3720	14744	157	-15230	-3	1	B GORSE	31	02	6	85	
8	188	051078	-4010	14451	162	-04240	-2	1	B ORSE			6	55	
8	031	261078	-3728	15111	183	-15060	-3	1	B GORSE	40	-01	6	115	
8	041	271078	-4206	14249	184	-04310	-2	1	B GORSE			6	70	
8	129	301078	-3825	15709	187	-14410	-3	1	B GORSE			6	90	
8	139	311078	-4247	15121	188	-15000	-3	1	B GORSE	24	-01	6	40	
6	142	141178	-3917	15733	202	-03270	-2	1	B GORSE			6	75	
6	122	151178	-3837	15719	203	-14380	-3	1	B GORSE			6	105	
1	084	181178	-4317	16441	206	-03010	-3	1	B GORSE			6	130	
6	137	191178	-3842	15841	207	-03210	-2	1	B GOR					

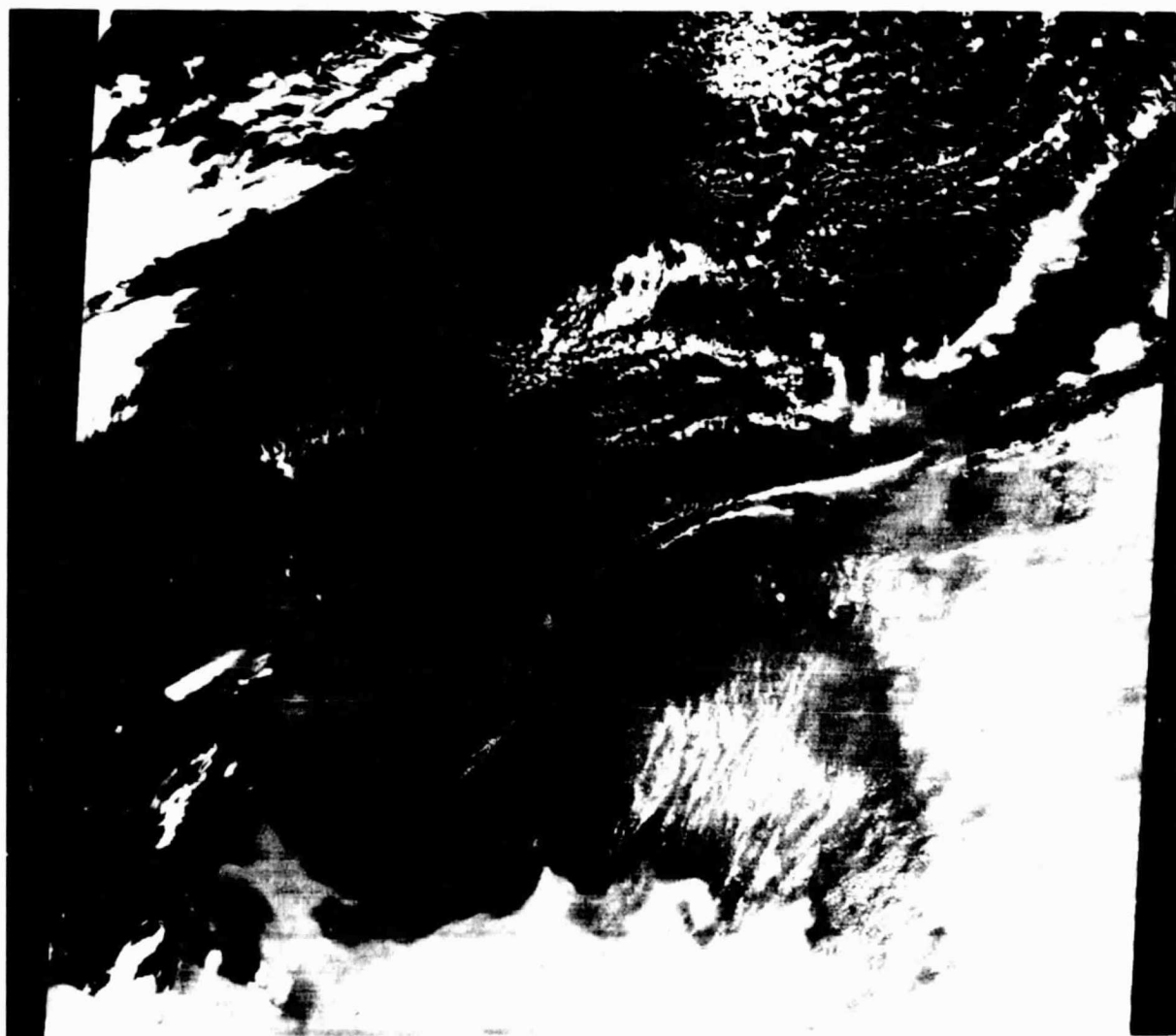
PRIORITY R GROUP(3) CONTINUED

R	FR	DATE	LAT	LONG	DAY	HHMM	TPP	PR	STATUS	POS	ERR	OB	MRT	TRUTH
7	039	111278	-4520	15419	219	-03430	-2	1	B GORSE			6	60	
7	510	131278	-4423	14746	231	-04070	-2	1	B GORSE			6	50	
7	013	191278	-3807	14739	237	-15120	-3	1	B GORSE	30	-01	6	95	

NUMBER OF IMAGES PRIORITY R, GROUP(3) = 33

NUMBER OF IMAGES PRIORITY B= 258

TOTAL NUMBER OF IMAGES LISTED= 687



217UL78 C S36-06/E155-41 N A-00006-15020-3
CSIRO - MINERAL PHYSICS - 9- 6-00 0.35

2.0°C ... 11.5°C

Plate 1. Enhanced HCMM IR image 21 Jul 78 (night-time). The zonal front near the southern border is the Sub-Tropical Convergence.

ORIGINAL PAGE IS
OF POOR QUALITY

Plate 2 overleaf.

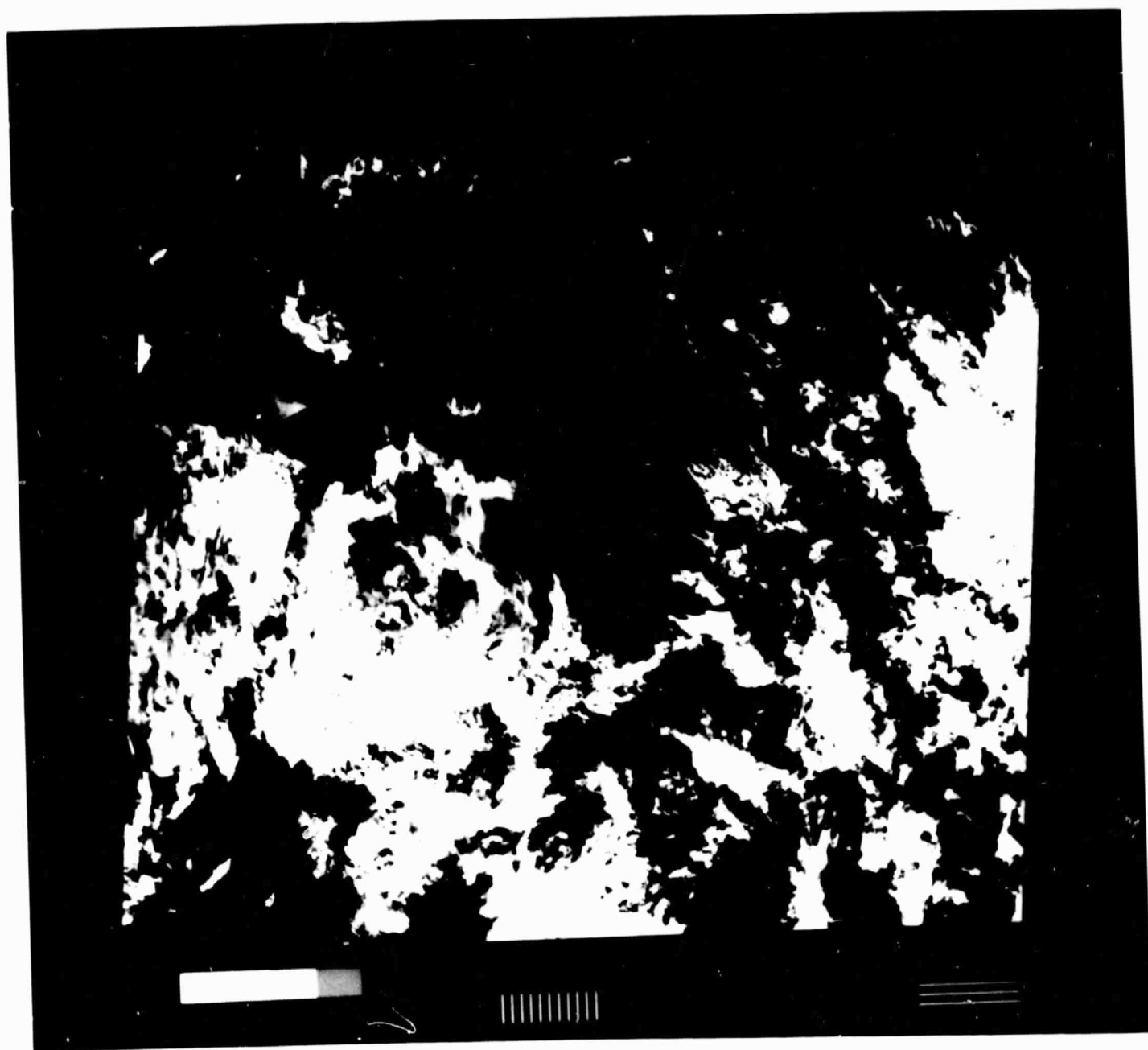
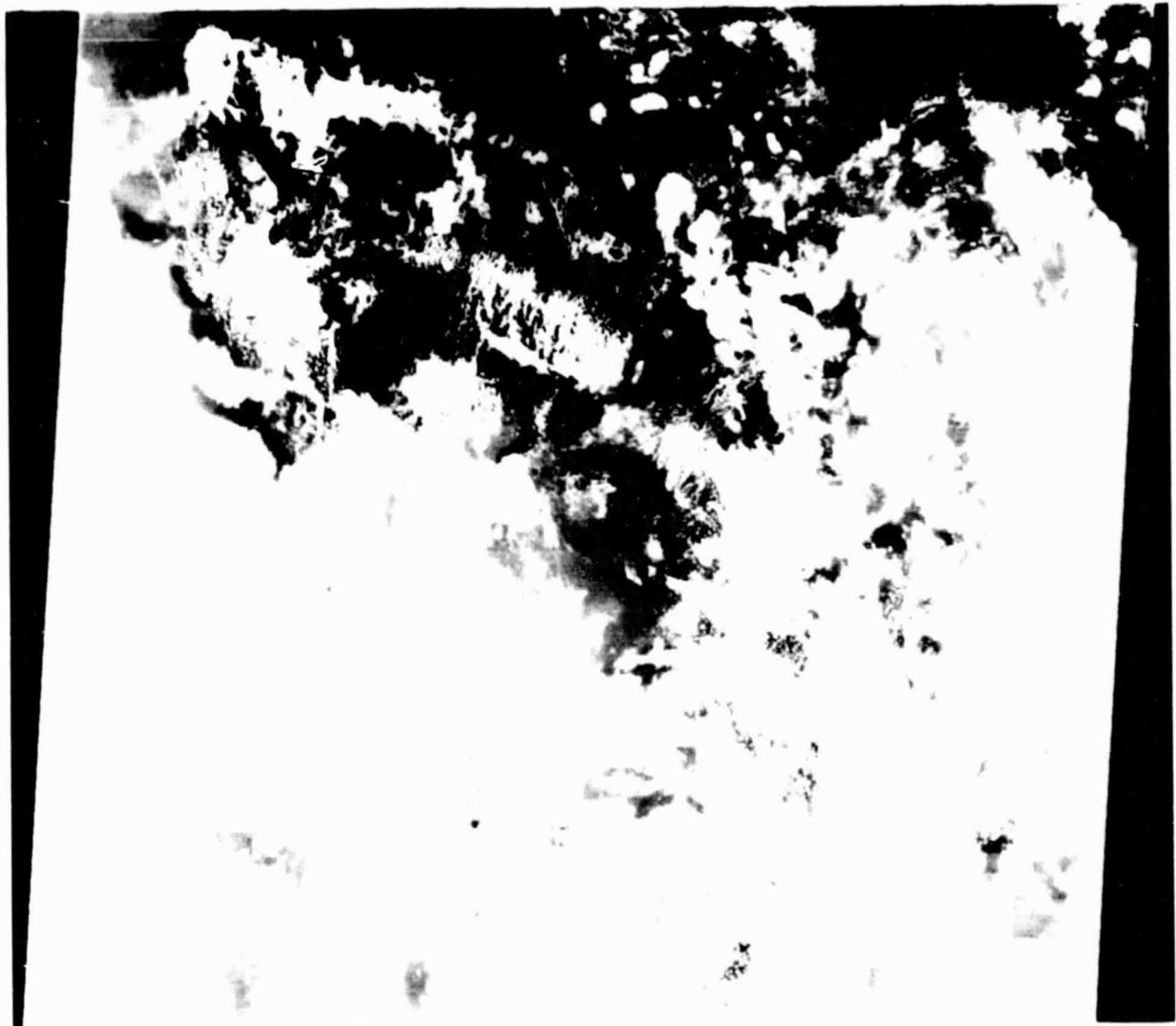


Plate 2. Standard HCME IR image (not enhanced) 1 Aug 73 (night-time).



1AUG78 C S30-01/E156-02 N 9-00097-15040-3
CSIRO - MINERAL PHYSICS - 9- 6-88 9.20

4.0°C ... 13.5°C

Plate 3. Enhanced HCMM IR image 1 Aug 78 (night-time) corresponding to Plate 2. The coastline of Eastern Australia is visible near the western edge of the image.

ORIGINAL PAGE 2
OF POOR QUALITY

Figure 1 overleaf.

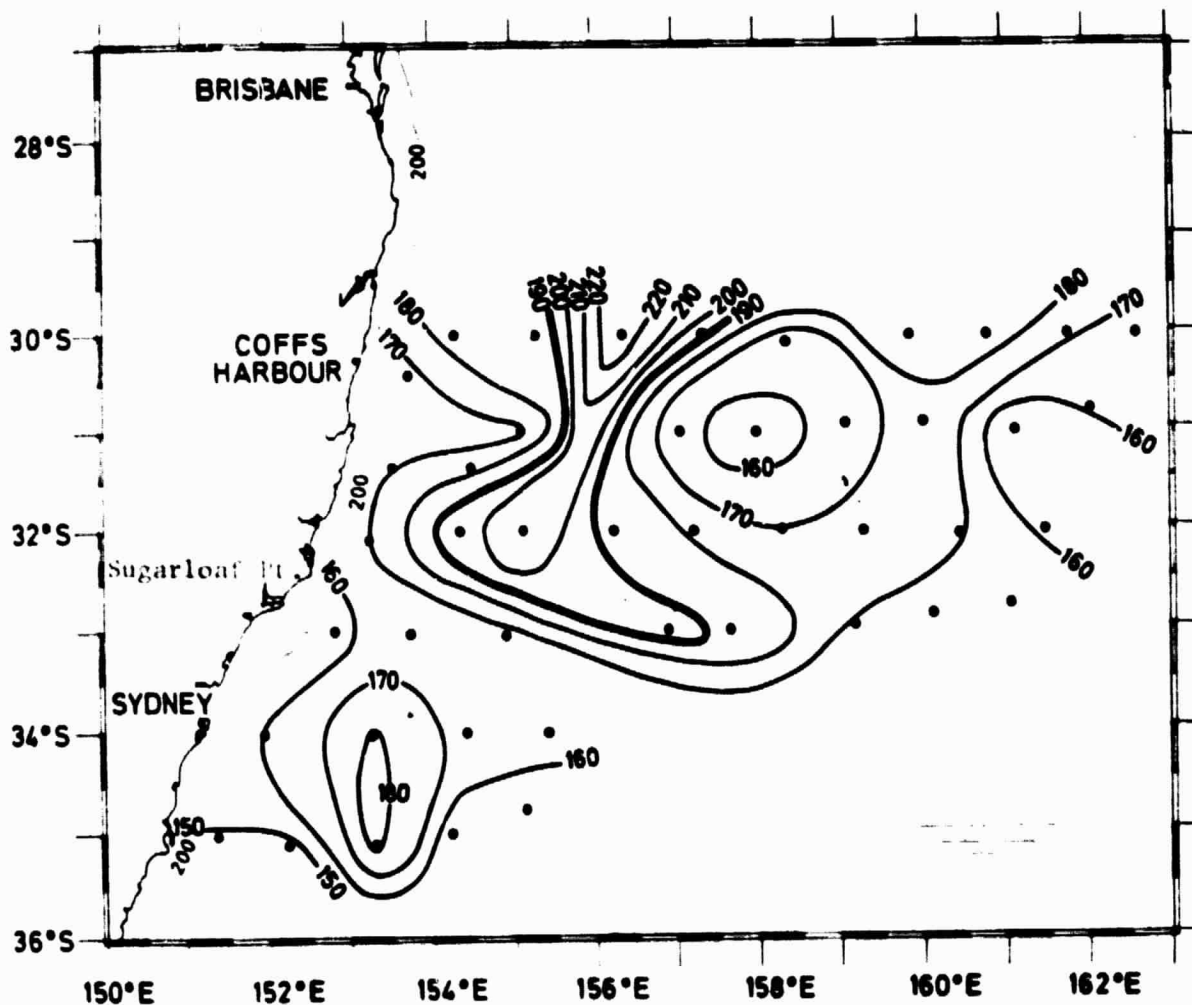
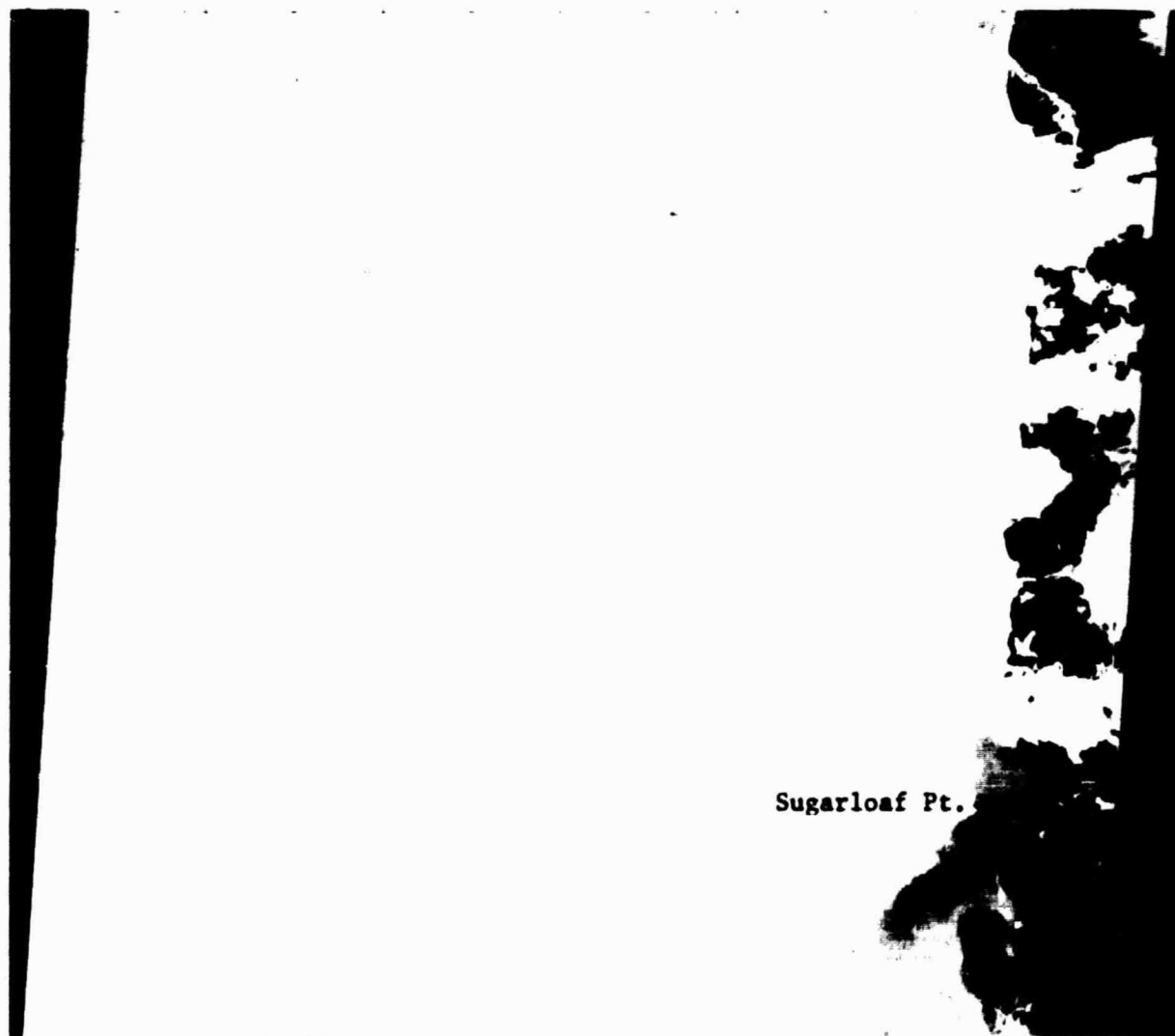


Figure 1. Dynamic topography $D(0/1300\text{m})$ dyn cm 29 Aug 78 determined by AXBT survey. The heavy contour (190 dyn cm) defines the Tasman Front where the strongest current is expected.

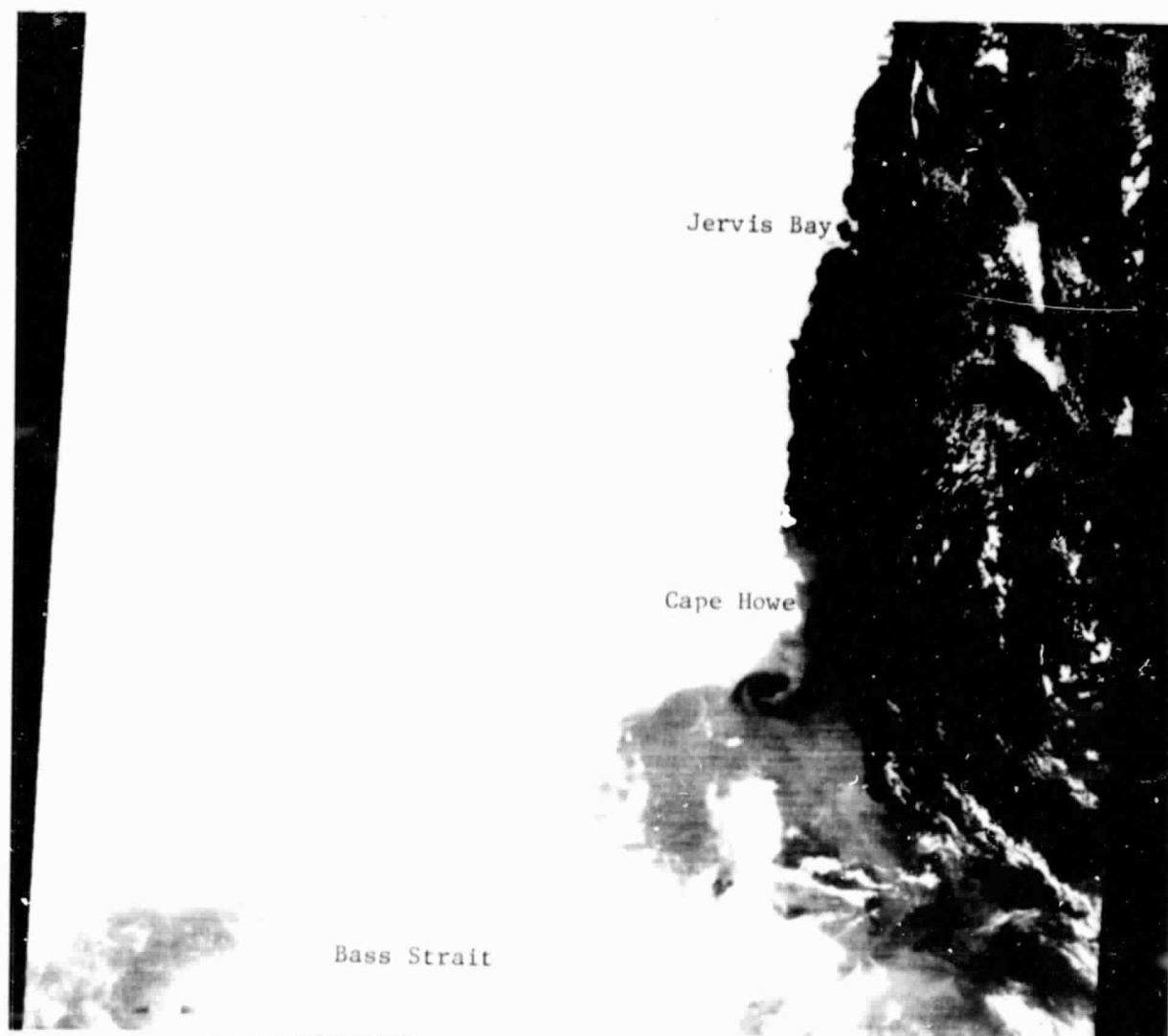
ORIGINAL PAGE 2
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200000 C 631-12/1190-00 H 0-00120-10220-3
CSTRO - MINERAL PHYSICS - 9-6-80 10.29

1.5°C ... 11.0°C

Plate 4. Enhanced HCMM IR image 29 Aug 78 (night-time). The Tasman Front extends eastwards offshore from Sugarloaf Point.



2 AUG 78 C 537-19/E148-29 N 0-00125-15250-3
 CSIRO - MINERAL PHYSICS - 9- 6-80 11. 4

-0.5°C

...

9.0°C

Plate 5. Enhanced HCMM IR image 29 Aug 78 (night-time). Bass Strait surface water extends along the coast north of Cape Howe.

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27JUN78 C 532-13/E181-02 D 4-40062-03270-2
CSIRO - MINERAL PHYSICS - 7-7-80 14:40

2.5⁰C ... 12.0⁰C

Plate 6. Enhanced HCMM IR image 21 June 78 (night-time). The Tasman Front can be seen as a meandering zonal boundary through scattered cloud cover.